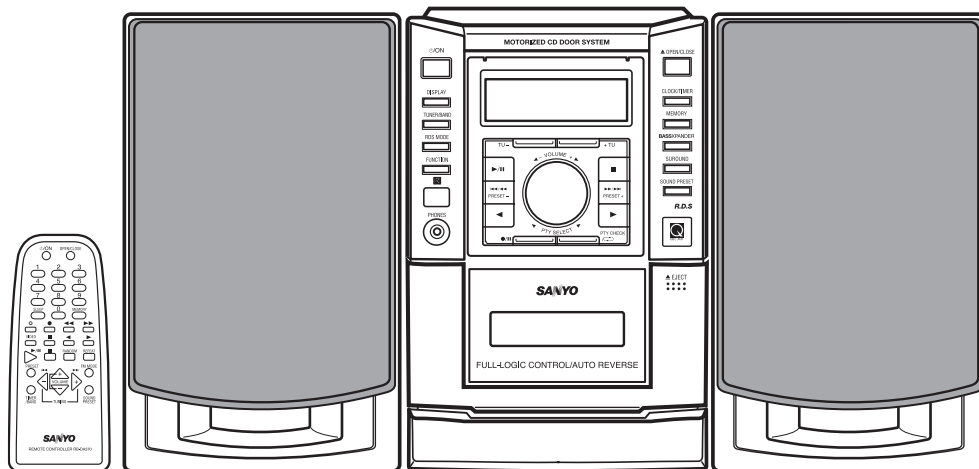


## Service Manual

## Micro Component System

## DC-DA370 (UK)



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PRODUCT CODE No.  
129 599 00

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This service manual consists of "DC-DA370U" (Main unit : 129 598 00) and "SX-DA370" (Speaker system : 165 027 00).

# SPECIFICATIONS

## Tuner

Reception frequency ..... FM : 87.5 - 108.0 MHz  
 MW: 522 - 1611kHz  
 LW : 144 - 288kHz

## CD player

Channels ..... 2-channel stereo  
 Sampling frequency ..... 44.1 kHz  
 Pick-up ..... Optical 3-beam semiconductor laser  
 Wow and Flutter ..... Below measurable limits  
 Wave length ..... 790 nm  
 Laser output ..... 0.6mW(Continuous wave max.)

## Cassette deck section

Track system ..... 4-track, 2-channel stereo  
 Frequency response ..... 60 Hz - 13.5 kHz  
 Signal to noise ratio ..... 50 dB  
 Wow and Flutter ..... 0.12% (WRMS)  
 Fast forward / Rewind time .... Approx. 110 sec. (C-60)

## General

Output power ..... 12.5 W x 2  
 (at 4 ohms, 10% distortion)  
 Inputs ..... VIDEO IN : 400 mV / 50k ohms  
 Outputs ..... SPEAKERS : 4 ohms  
 PHONES : 8 - 32 ohms  
 OPTICAL OUT:Optical  
 Power requirements ..... AC 230V, 50Hz  
 Power consumption ..... 40 W  
 Dimensions (W x H x D) ..... Approx. 160 x 251 x 207 mm  
 Weight ..... Approx. 3.2 kg

## Speaker system

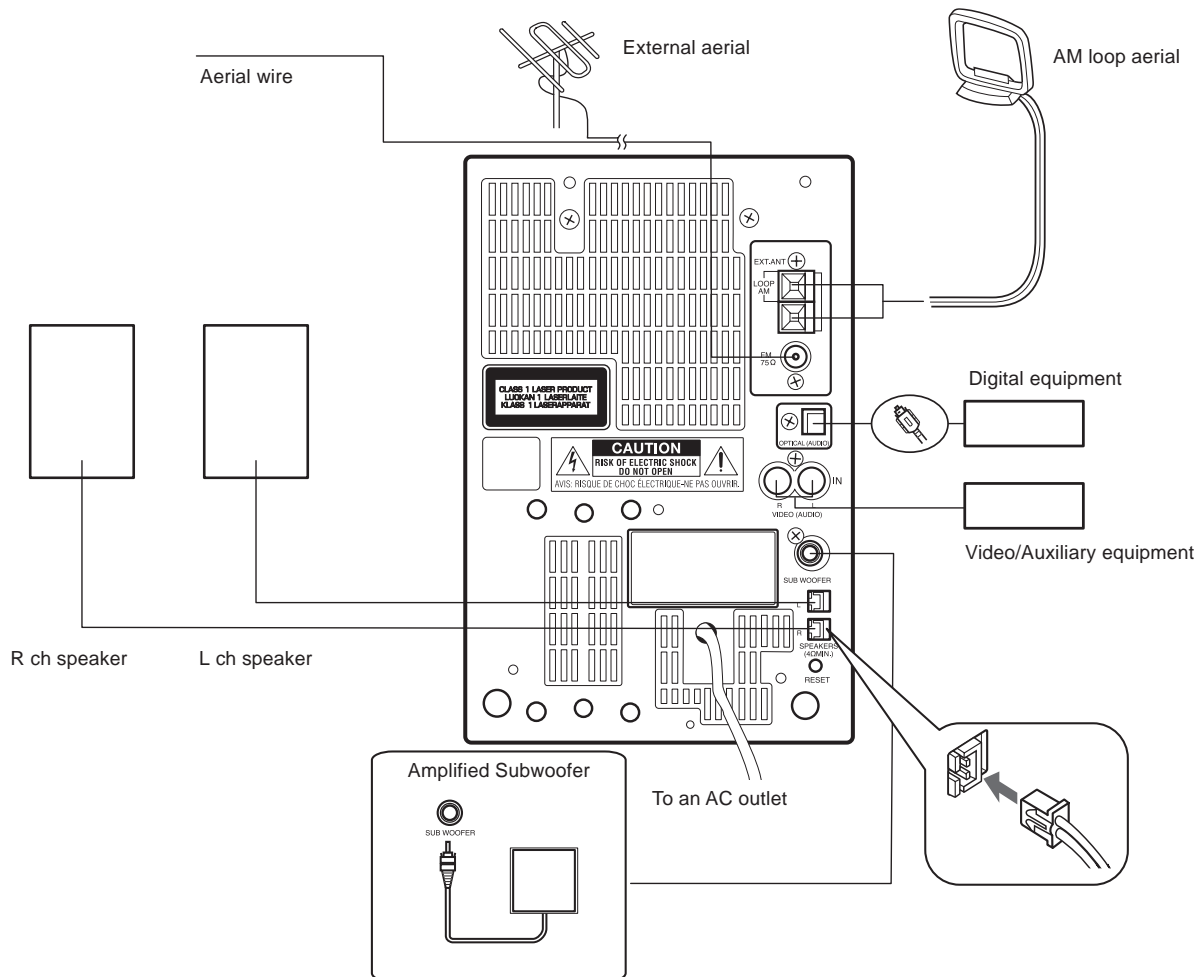
Type ..... 3 way bass reflex  
 Unit used : Woofer ..... 10 cm cone type  
 : Mid range ..... 5 cm cone type  
 : Tweeter ..... 2 cm piezoelectric

## Maximum

power-handling capacity ..... 25 Watts (peak)  
 Nominal impedance ..... 4 ohms  
 Dimensions (W x H x D) ..... Approx. 150 x 245 x 224 mm  
 Weight ..... Approx. 1.9 kg (per speaker)

Specifications subject to change without notice.

# SYSTEM CONNECTIONS



## LASER BEAM SAFETY PRECAUTION

- Pick-up that emits a laser beam is used in this CD player section.

### CAUTION :

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE

LASER OUTPUT.....0.6 mW Max. (CW)  
WAVELENGTH .....790 nm

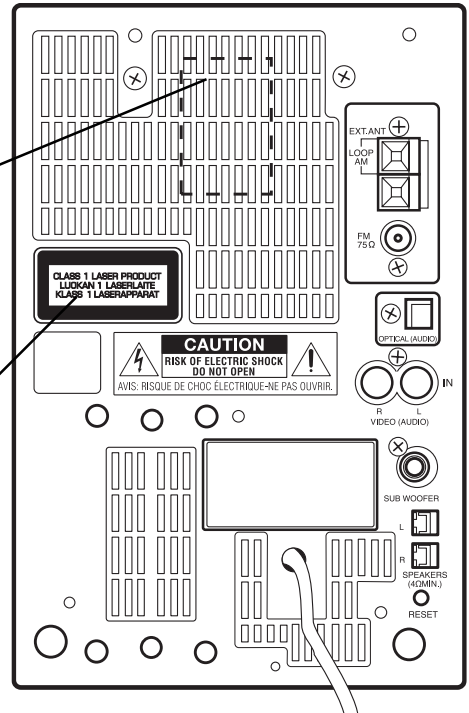
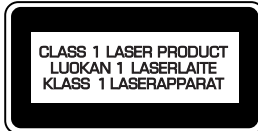
CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDSÆTTELSE FOR STRÅLING.

VARNING – OSYNLIG LASER STRÅLNING NÅR DENNA DEL ÅR ÖPPNAD OCH SPÄRR ÅR URKOPPLAD. STRÅLEN ÅR FARLIG.

VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRIT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.

VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTIINI NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.



## CD PICK-UP MAINTENANCE

### About pick-up (Optical lens) Cleaning

Clean a lens with swab of the cotton which moistened it with alcohol, cleaning paper or cleaning disc appointed.

Specified cleaning disc : LC-1 (Part code : 645 026 1961 ..... manufactured by SANYO.)

Show a clean procedure in the following in reference by swab of cotton.

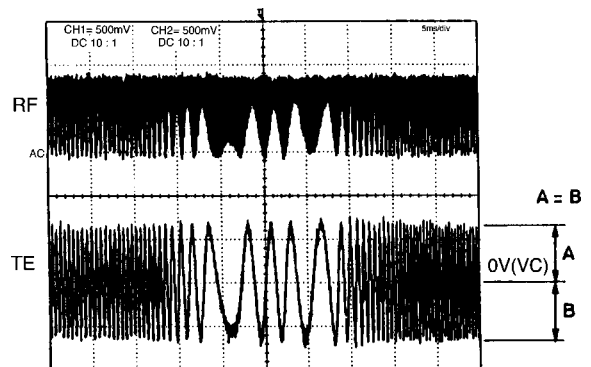
1. Cotton swab is wrapped with Cleaning paper.
2. Add the isopropyl alcohol.
3. Gently move the tip of cotton swab just like a draw a whirlpool from inside to outside on the surface of lens.

## CD PLAYER ADJUSTMENTS

### 1. ADJUSTMENTS

#### (1) Confirm the tracking balance

1. Turn on the POWER switch.
2. Connect an Oscilloscope to TP2 (TE) and TP4 (VC).
3. Set the test disc.
4. Press "PLAY" button to turn into the "PLAY" mode.
5. Keep holding "SKIP" button down so as to be "SERCH" mode, then confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V (VC).

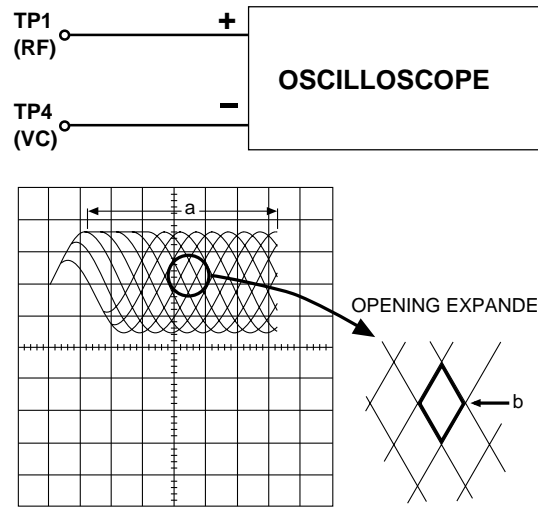


200mV/div.  
5ms/div.

## CD PLAYER ADJUSTMENTS

### (2) Checking the "eye" pattern

1. Switch "ON" the POWER.
2. Connect an oscilloscope to TP1 (RF) and TP4 (VC).
3. Load the test disc.
4. Press the PLAY button.
5. Check to be sure that the "eye" pattern is at the center of waveform and that the diamond shape is clearly defined.
6. Press the STOP button.
7. Turn off the POWER switch.

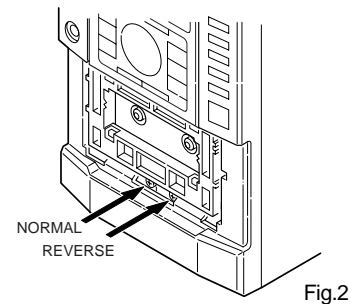
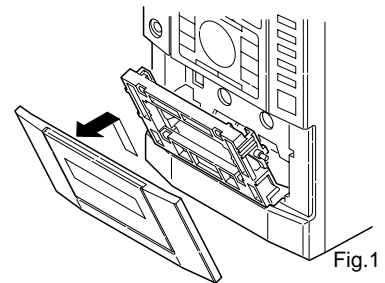


## TAPE ADJUSTMENTS

### 1. Azimuth Adjustment

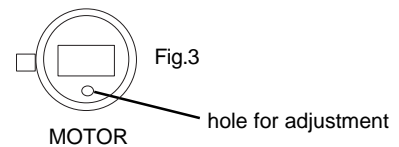
- Be sure to clean the heads before attempting to make any adjustment.
- Be sure both channels (1 and 2) are the same level.  
(Using a dual-channel oscilloscope)
- Be sure both channel's waveform are same for the phase matching.
- After completion of the adjustment, use the threadlock (TB-1401B) to secure the azimuth adjustment screws.

1. Remove the cover deck as Fig.1.
2. Load a test tape (VTT-738 etc. : 10kHz) in the Deck.
3. Press the PLAY button. (Normal playback)
4. Use a + tip screwdriver to turn the screw for normal azimuth adjustment so that the left and right outputs are maximized at the same phase during normal playback. See Fig.2.
5. Press the PLAY button. (Reverse playback)
6. Use a + tip screwdriver to turn the screw for reverse azimuth adjustment so that the left and right outputs are maximized at the same phase during reverse playback.
7. Adjust so that the waveforms for the left and right channels are in alignment.



### 2. Tape Speed Adjustment

- Connect the Frequency Counter to TAPE OUT.
1. Insert the test tape (MTT-111N, etc.; 3,000Hz) into the DECK.
  2. Press the PLAY button. .
  3. Adjust a hole on the motor bottom so that a frequency counter reading of  $3,000 \pm 5\text{Hz}$  is obtained. See Fig.3.
  4. Press the STOP button, and eject the test tape.



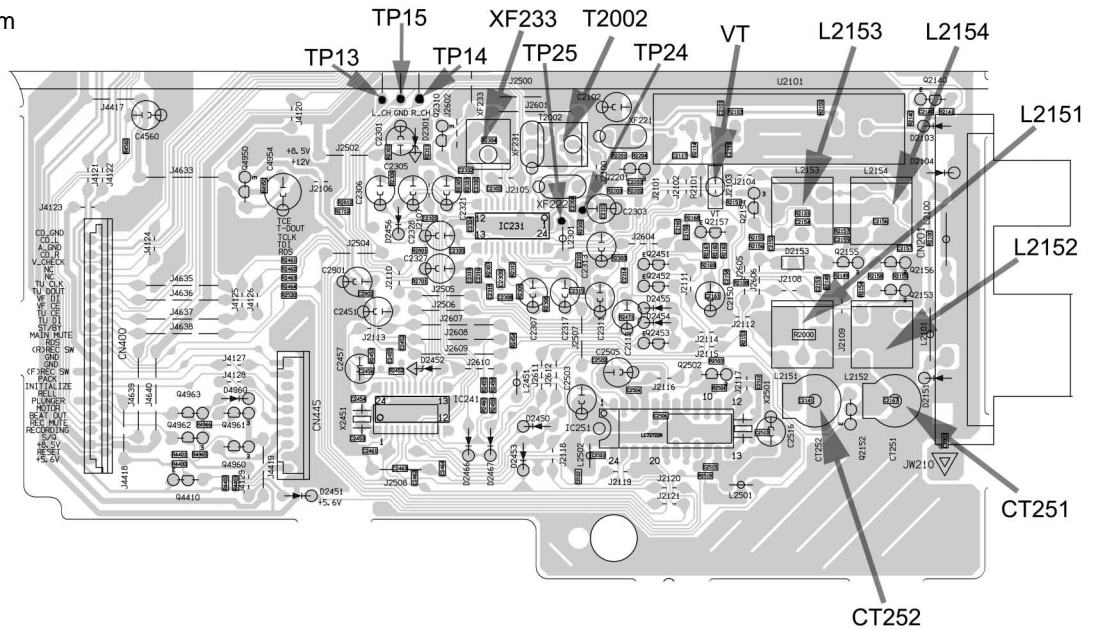
### 3. Torque Measurement

Item	Take-up Torque	Back tention	Pulley tention
Test Cassette	PLAY : TW2111A (FWD) PLAY : TW2121A (REV) F.FWD / REW : TW2231	PLAY : TW2111A (FWD) PLAY : TW2121A (REV)	Driving power cassette : TW-2412 (PLAY) TW-2422(REV. PLAY)
PLAY/REV.	30 ~ 65 grcm	2 ~ 6 grcm	> 50grcm
F.FWD	30 ~ 65 grcm	-	70 ~140 grcm
REW	70 ~ 140 grcm	-	

# TUNER ADJUSTMENTS

- Use a plastic screw driver for adjustments.
- MODE : ST (Stereo)
- Speaker impedance : 4 ohm
- TUNING

FM : 87.5 - 108MHz  
 MW: 522 - 1611kHz  
 LW : 144 - 288kHz



Standatd Input: 60dB

Antenna : 75 unbalanced , Modulation : 1 kHz

Dev. : ± 22.5kHz(MONO) 22.5kHz(STEREO) ± 6.75kHz(PILOT)

## 1. FM

Step	Adjusting Circuit	Connection		SG Frequency	Set Position	Adjustment	Remark
		Input	Output				
1	IF(0V) Adjustmen	98.0MHz.Input Level FM Antenna SG=66dBµV	Alignment voltage IC231 3-22pin(TP24,25) is 0.0± 0.05V	98MHz	Low	XF233	Alignment voltage IC231 3-22pin is 0.0± 0.5V
2	Cover Voltage	---	Connect Digital DC voltmeter to	87.5MHZ	Low	---	1.4± 0.05V
		---	TP11(H), TP12(E).	108.0MHZ	High	---	6.8± 0.5V

SG Modulation : 1kHz, 30%

Antenna, IRE Loop, Distance : 60 cm

## 2. MW

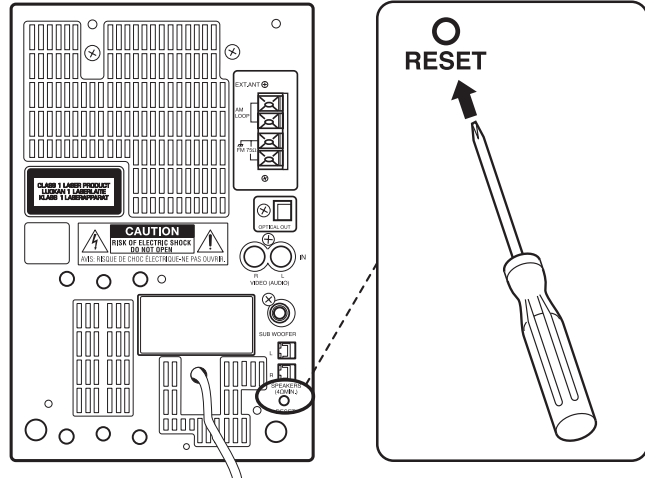
Step	Adjusting Circuit	Connection		SG Frequency	Set Position	Adjustment	Remark
		Input	Output				
1	IF	---	Connect Sweep generator to test point TP13(L)or TP14(R) and TP15(E).	450kHz (at 999kHz)	Low	T2002	AF Maximum
2	Cover Voltage	---	Connect Digital DC voltmeter to	522kHz	Low	L2153	1.00± 0.05V
		---	TP11(H) and TP12(E).	1611kHz	High		6.70± 0.10V
3	Tracking	Connect AM SG to Test loop Ant.	Connect to VTVM point TP13(L)or TP14(R) and TP15(E).	603KHZ	Low	L2151	AF Maximum
				1404kHz	High	CT252	

## 3. LW

Step	Adjusting Circuit	Connection		SG Frequency	Set Position	Adjustment	Remark
		Input	Output				
1	Cover Voltage	---	Connect Digital DC voltmeter to	144kHz	Low	L2154	1.00± 0.05V
		---	TP11(H) and TP12(E).	288kHz	High	---	5.42± 0.10V
2	Tracking	Connect AM SG to Test loop Ant.	Connect to VTVM point TP13(L)or TP14(R) and TP15(E).	162kHz	Low	L2152	AF Maximum
				279kHz	High	CT251	

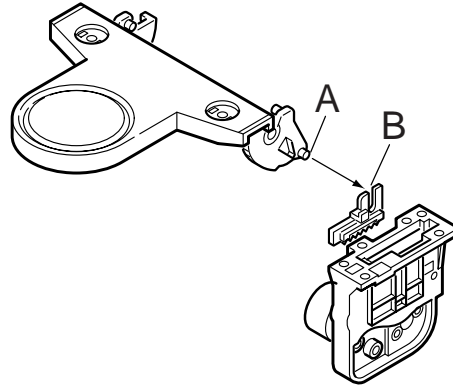
## WHAT TO DO IF

If the operation of the unit or display is not normal, even though the appropriate buttons have been pressed. Disconnect the power cord from the AC outlet, then press "RESET" (rear of the unit) for at least 30 seconds.



## WHEN ASSEMBLING THE RACK GEAR AND CD LID

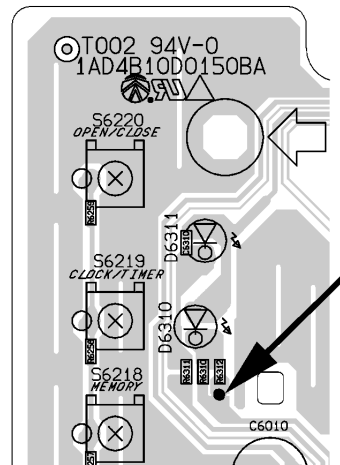
When assembling the rack gear and CD lid, "A" part should be inserted into the "B" part.



## WHEN REPLACING LED (D6310)

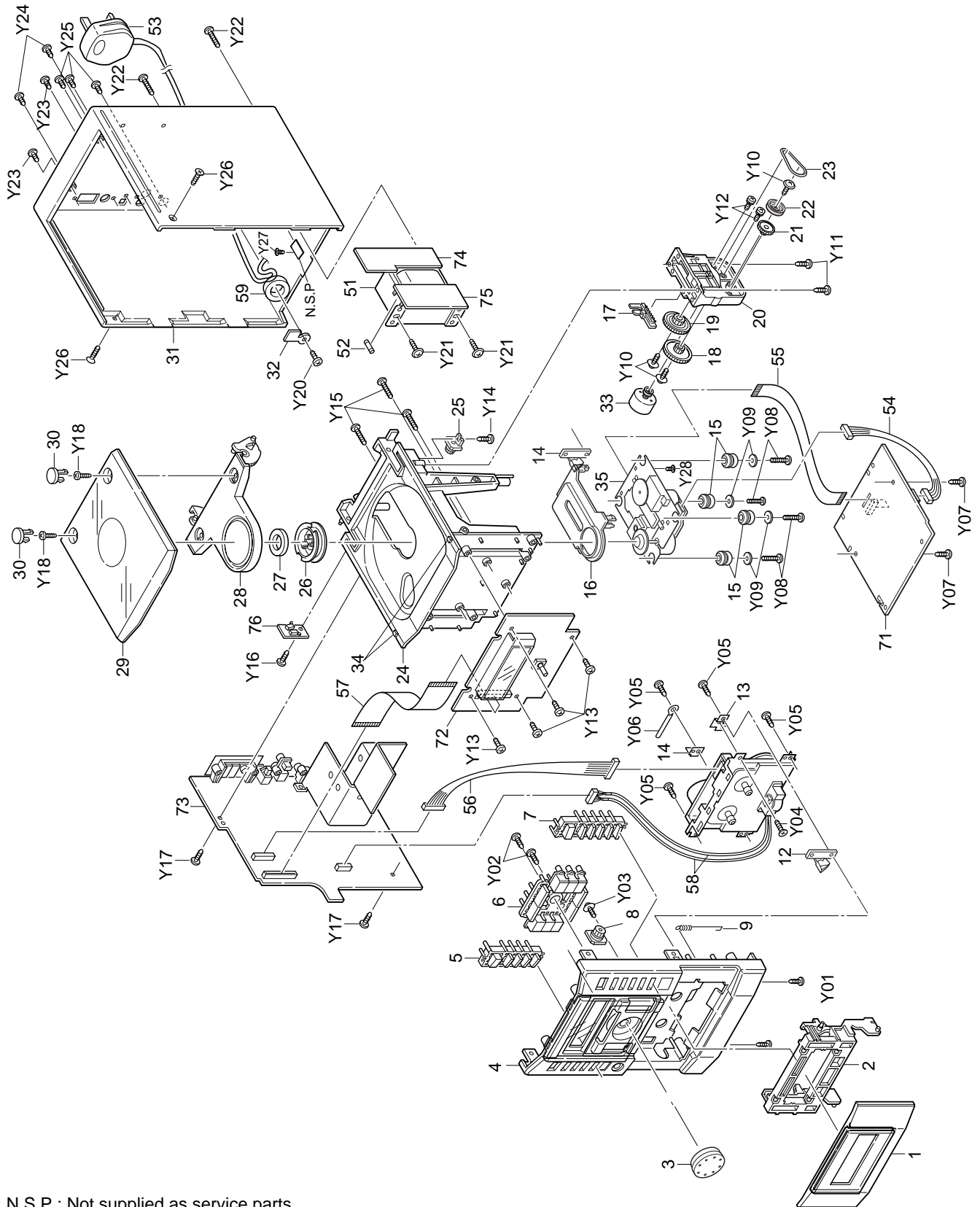
When replacing the LED (D6310);

If the pointed pattern is shorted, remove the soldering first. Then replace LED (D6310) with new LED on the parts list.



FRONT P.W.BOARD

# EXPLODED VIEW (CABINET & CHASSIS)



N.S.P : Not supplied as service parts.

# PARTS LIST

## PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL  $\Delta$  IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY  $\Delta$ , USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

**CAUTION :** Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.

Regular type resistors are less than 1/4 W Carbon type and Chip type resistors.

Regular type capacitors are less than 50 V and less than 1000  $\mu$ F type of Ceramic type, Electrical type and Chip type.

### PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 314 2843	CARTON CASE
	614 314 2850	CUSHION,REAR
	614 314 2867	CUSHION,FRONT
	614 314 2904	INSTRUCTION MANUAL
	614 245 8587	NOTICE,AC CODE
	645 037 8102	POLY BAG-0150X0500*NC,AC CORD
	614 229 4635	ANT
or	614 308 5515	ANT
	645 005 1227	ASSY,ANTENA,LOOP
	645 046 8322	ASSY,ANTENA,LOOP
	645 044 1110	REMOCON,***
	614 318 9404	LID BATTERY,REMOCON
	614 314 2300	ASSY,BOX,SPEAKER,SPEAKER(L)
	614 318 3068	ASSY,BOX,SPEAKER,SPEAKER(R)
	614 314 2317	ASSY,GRILLE

### CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 314 2409	ASSY,DOOR,DECK
2	614 314 2645	LID,CASSETTE
3	614 303 5718	KNOB,VR
4	614 314 2430	ASSY,PANEL,FRONT
5	614 314 2454	BUTTON,POWER,5KEYS
6	614 314 2478	BUTTON,PLAY,10KEYS
7	614 314 2515	BUTTON,MEMORY,6KEYS
8	614 309 7969	ASSY,GEAR,LID CASSETTE
9	614 303 5794	SPRING,DOOR DECK
12	614 303 1277	LATCH,CAM,DECK,DOOR,LOCKING
13	614 316 0359	MOUNTING,HOOK,ASSY,MECHA
14	614 304 5700	HOLDER,MAIN PCB,MAIN PCB
15	614 310 3899	SPACER,MECHA,MTG CD+DA11
16	614 307 2072	COVER,PICK-UP
17	614 314 8067	RACK,GEAR-1
18	614 318 5079	ASSY,CLUTCH
19	614 314 8043	GEAR
20	614 314 8050	MOUNTING,MOTOR
21	614 314 8036	GEAR
22	614 237 7161	PULLEY
23	614 300 8293	BELT,SQUARE
24	614 314 2669	MOUNTING,CD
25	614 309 8270	ASSY,GEAR,LID,CD
26	614 307 8821	PULLEY
27	614 303 0256	LATCH,MAGNET
28	614 314 2652	LID,CD
29	614 314 2614	DEC,WINDOW,CD
30	614 315 9254	DEC,CAP
31	614 314 2393	ASSY,CABINET,REAR
32	614 316 1172	STOPPER
33	614 318 8841	ASSY,MOTOR
34	614 269 9621	SPACER,WINDOW,CD+WINDOW
35	614 307 9804	ASSY,MECHA,CDDA11N-SASH
	614 129 9136	LUG,LEAD FIX

### FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 165 3803	SCR S-TPG BIN 2.3X10,F-PANEL
Y02	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+BUTTON,PLAY
Y03	412 003 1708	SPECIAL SCREW,FRONT+ASSY,GEAR
Y04	411 022 4608	SCR S-TPG FLT 3X8, MECHA+MOUNTING,HOOK
Y05	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+LATCH,CAM+MECHA
Y07	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+CD PCB
Y08	411 021 1806	SCR S-TPG BIN 2.6X10,MTG CD+DA11
Y09	411 092 0906	WASHER Z 2.6X10X0.5,MTG CD+DA11
Y10	412 061 7803	SPECIAL SCREW,GEAR
Y11	411 021 3503	SCR S-TPG BIN 3X10,ASSY, MOTOR+MOUNT CD
Y12	411 044 7502	SCR PAN+SW 2X5,MOTOR
Y13	411 021 3503	SCR S-TPG BIN 3X10,MTG CD+F-PCB
Y14	411 021 3503	SCR S-TPG BIN 3X10, MOUNTING,CD+ASSY,GEAR
Y15	411 021 4906	SCR S-TPG BIN 3X20, P-PANEL+MTG CD
Y16	411 021 3503	SCR S-TPG BIN 3X10,SWITCH, PWB+MOUNTING CD
Y17	411 021 3503	SCR S-TPG BIN 3X10,MAIN PCB
Y18	411 165 3803	SCR S-TPG BIN 2.3X10,LID CD+DEC WINDOW CD
Y20	411 021 3503	SCR S-TPG BIN 3X10,REAR+STOPPER
Y21	412 032 6408	SPECIAL SCREW,REAR+P-TRANS
Y22	411 021 4906	SCR S-TPG BIN 3X20,C-REAR
Y23	411 021 3404	SCR S-TPG BIN 3X10, C-REAR(ANT TERMINAL)
Y24	411 021 3404	SCR S-TPG BIN 3X10,MTG CD+REAR
Y25	411 021 3404	SCR S-TPG BIN 3X10,C-REAR+OPT
Y26	411 098 7800	SCR S-TPG FLT 3X12, C-REAR+MTG(L/R)
Y27	411 021 3503	SCR S-TPG BIN 3X10, REAR+AC CORD PCB
Y28	411 156 2105	SCR S-TPG BIN 2.3X6,LUG45

### ELECTRICAL PARTS

REF.NO.	PART NO.	DESCRIPTION
51	$\Delta$ 645 044 6078	TRANS,POWER
52	$\Delta$ 423 016 8103	FUSE 250V 4A
53	$\Delta$ 645 033 7543	CORD,POWER-1.6MK
or	$\Delta$ 645 036 9797	CORD,POWER-1.6MK
or	$\Delta$ 645 036 9803	CORD,POWER-1.6MK
54	614 316 8041	ASSY,WIRE,CD-CD MECHA
55	614 316 8072	FLEXIBLE FLAT CABLE,CD-CD MECHA
56	614 316 8027	ASSY,WIRE,AMP-TAPE MECHA
57	614 316 8065	FLEXIBLE FLAT CABLE,AMP-FR
58	614 316 8010	ASSY,WIRE,R/P HEAD-AMP
59	645 031 7637	CORE,FERRITE
	614 316 8034	ASSY,WIRE,CD-LID



# PARTS LIST

## CD P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 314 9606	ASSY,PWB CD (Only Initial)
CN111	645 040 0513	SOCKET,FPC 15P
or	645 026 2463	SOCKET,FPC 15P
CN113	645 005 8127	PLUG,6P,BASEMECHA
or	614 310 2472	PLUG,6P,BASEMECHA
CN114	645 005 9292	PLUG,5P
or	614 310 2465	PLUG,5P
CN115	614 316 7990	ASSY,WIRE,WIRE
D1211	407 099 4603	ZENER DIODE MTZJ3.9B
D1402	407 099 5204	ZENER DIODE MTZJ5.1B
D1404	407 012 4406	DIODE 1SS133
IC101	409 396 8100	IC LA9241ML
IC102	409 435 2106	IC LC78622NE
IC103	△ 409 372 9602	IC LA6541
IC104	△ 409 441 4507	IC TA7291S(M)
L1451	645 031 7835	INDUCTOR,10U K
or	645 001 4550	INDUCTOR,10U K
PR140	△ 645 014 2499	PROTECTOR,0.4A 125V
Q1301	405 151 4608	TR KTA1270-O
or	405 151 4509	TR KTA1270-Y
or	405 008 6809	TR 2SB808-F-SPA
or	405 008 7103	TR 2SB808-G-SPA
Q1401	△ 405 009 5306	TR 2SB927-T
or	△ 405 009 5207	TR 2SB927-S
or	△ 405 141 3604	TR KTA1273-Y
R1211	△ 402 082 0709	RESISTOR 5.6 J- 2W
X1451	645 020 9024	OSC,CRYSTAL 16.9344MHZ

## FRONT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 314 9590	ASSY,PWB FRONT (Only Initial)
AH601	614 314 2621	HOLDER,LCD,HOLDER_LCD
AR601	614 315 6505	REFLECTOR,REFLECTOR_LCD
AS601	614 314 3000	DEC,SHEET,LCD,DEC_SHEET_LCD
C6011	403 262 8607	DL-ELECT 0.047F Z 5.5V
or	403 304 4802	DL-ELECT 0.047F Z 5.5V
CN601	645 012 5362	SOCKET,FPC 32P
D6010	407 012 4406	DIODE 1SS133
D6110	407 012 4406	DIODE 1SS133
D6111	407 012 4406	DIODE 1SS133
D6112	407 012 4406	DIODE 1SS133
D6113	407 012 4406	DIODE 1SS133
D6114	407 099 5303	ZENER DIODE MTZJ5.6B
D6115	407 099 4603	ZENER DIODE MTZJ3.9B
D6310	407 221 6109	LED FA5366X * See page 5.
D6311	407 222 3800	LED E1L55-7B0A
IC601	410 405 4204	IC LC867240A-5V46
L6010	645 001 5441	INDUCTOR,2.2U K
LCD60	645 043 6239	LCD
Q6101	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 019 3804	TR 2SC536-G-NP
or	405 019 2708	TR 2SC536-F-NP
Q6102	405 004 5004	TR 2SA608-G-NP
or	405 004 4502	TR 2SA608-F-NP
or	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
Q6103	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
or	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
Q6105	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M

REF.NO.	PART NO.	DESCRIPTION
Q6106	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q6107	405 004 5004	TR 2SA608-G-NP
or	405 004 4502	TR 2SA608-F-NP
or	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
Q6108	405 017 9709	TR 2SC3330-U
or	405 017 9600	TR 2SC3330-T
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 143 8706	TR KTC3199-GR
S6001	645 044 6535	SWITCH,ROTARY(ENCODER)
S6110	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
S6111	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
S6112	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6113	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6114	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6115	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
S6116	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6117	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6118	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6119	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6210	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6211	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6212	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6213	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6214	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6215	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6216	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6217	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T

## PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
S6218	614 240 1002	SWITCH,TACT	D4994	407 098 3300	DIODE RL153-BF-S2
or	645 006 5958	SWITCH,PUSH 1P-1T	D4998	407 012 4406	DIODE 1SS133
S6219	614 220 5471	SWITCH,TACT	HS401	614 314 3017	HEAT SINK,HEATSINK
or	645 006 5958	SWITCH,PUSH 1P-1T	IC231	409 474 3201	IC LA1844ML
or	614 240 1002	SWITCH,TACT	IC241	409 439 4502	IC LC72121M-D
S6220	614 220 5471	SWITCH,TACT	IC440	409 451 7406	IC AN7348K
or	645 006 5958	SWITCH,PUSH 1P-1T	IC441	409 500 2208	IC LC75343-MPB
or	614 240 1002	SWITCH,TACT	IC442	△ 409 451 2104	IC TDA7269
SE601	614 220 5471	SWITCH,TACT	IC443	409 189 3404	IC BA7755A
X6101	407 217 1101	PHOTO DIODE SPS-442-1G	IC445	409 469 6200	IC MM1453XF
X6102	645 032 1627	OSC,CRYSTAL 32.768KHZ	IC446	△ 409 039 9204	IC NJM78L05A
	645 018 6103	OSC,CERAMIC 6.000MHZ	L2100	△ 645 037 2858	CORE,PIPE
	614 317 3397	CUSHION	L2101	△ 645 037 2858	CORE,PIPE

### TUNER & AMPLIFIER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
73	614 314 5028	ASSY,PWB AMP-TU (Only Initial)	L2151	645 040 2685	TRANS,ANT,796KHZ
C2457	403 259 0508	NP-ELECT 1U M 50V	L2152	645 046 7998	TRANS,ANT,796KHZ
C4601	403 057 3503	POLYESTER 0.1U K 50V	L2153	645 040 2708	TRANS,OSC,796KHZ
C4605	403 061 3605	POLYESTER 0.039U J 50V	L2154	645 040 2722	TRANS,OSC,796KHZ
C4606	403 061 7702	POLYESTER 4700P J 50V	L2301	645 004 0580	INDUCTOR,1M J
C4607	403 059 3204	POLYESTER 2200P J 50V	L2451	645 001 4581	INDUCTOR,100U K
C4608	403 060 2807	POLYESTER 0.027U K 50V	or	645 031 7842	INDUCTOR,100U K
C4743	403 057 3503	POLYESTER 0.1U K 50V	L4600	645 006 1523	INDUCTOR,470U J
C4843	403 057 3503	POLYESTER 0.1U K 50V	L4601	645 006 1523	INDUCTOR,470U J
C4950	403 332 7400	ELECT 2200U M 50V	L4602	645 037 2858	CORE,PIPE
C4984	403 194 3800	ELECT 2200U M 25V	L4603	645 006 1523	INDUCTOR,470U J
or	403 329 3309	ELECT 2200U M 25V	L4604	645 037 2858	CORE,PIPE
CN201	614 255 5750	TERMINAL	LUG45	614 129 9068	LUG
or	645 032 6394	TERMINAL	LUG46	614 129 9082	LUG
CN400	645 012 5362	SOCKET,FPC 32P	PR495	△ 645 014 2505	PROTECTOR,0.8A 125V
CN430	645 005 7373	PLUG,3P	PR496	△ 645 014 2512	PROTECTOR,1A 125V
or	614 310 2441	PLUG,3P	Q2140	405 020 7402	TR 2SC945A-P
CN431	407 218 1100	PHOTO COUPLE GP1FA550TZ	or	405 020 7204	TR 2SC945A-K
or	407 215 1608	PHOTO COUPLE TOTX178A	or	405 019 3705	TR 2SC536-G-AUD-SPA
CN440	614 310 2472	PLUG,6P	or	405 017 9709	TR 2SC3330-U
or	645 005 8127	PLUG,6P	or	405 017 9600	TR 2SC3330-T
CN441	614 310 2748	PLUG,3P,POWER	or	405 011 8609	TR 2SC1740S-S
or	645 004 2898	PLUG,3P,POWER	or	405 011 8500	TR 2SC1740S-R
CN445	614 310 2519	PLUG,10P	or	405 143 8706	TR KTC3199-GR
or	645 005 8158	PLUG,10P	Q2152	405 016 0806	TR 2SC2839-E
CN450	614 276 6835	SOCKET,JACK	or	405 151 4103	TR KTC3193-Y
CN455	645 011 6384	JACK,PHONE D3.6,HEADPHONE	or	405 151 4202	TR KTC3193-O
CN456	645 006 1875	PLUG,2P,SPEAKER	or	405 151 4103	TR KTC3193-Y
CN457	645 006 1875	PLUG,2P,SPEAKER	or	405 016 0806	TR 2SC2839-E
CN458	645 043 8905	JACK,RCA	or	405 151 4103	TR KTC3193-O
CT251	645 032 5236	TRIMMER,18PF	or	405 151 4103	TR KTC3193-Y
CT252	645 032 5663	TRIMMER,7PF	or	405 151 4202	TR KTC3193-O
D2103	407 012 4406	DIODE 1SS133	or	405 016 0806	TR 2SC2839-E
D2104	407 012 4406	DIODE 1SS133	Q2156	405 151 4103	TR KTC3193-Y
D2151	407 012 4406	DIODE 1SS133	or	405 151 4202	TR KTC3193-O
D2153	407 105 1602	VARACTOR DI SVC342M-V	or	405 151 4202	TR KTC3193-O
or	407 105 1305	VARACTOR DI SVC342L-V	Q2157	405 035 8609	TR 2SK544-F
D2301	407 063 9108	ZENER DIODE MTZJ6.8B	or	405 035 8708	TR 2SK544-E
D2450	407 012 4406	DIODE 1SS133	Q2201	405 016 0806	TR 2SC2839-E
D2451	407 012 4406	DIODE 1SS133	or	405 151 4103	TR KTC3193-Y
D2452	407 153 7502	ZENER DIODE GZS3.0B	or	405 151 4202	TR KTC3193-O
D2453	407 012 4406	DIODE 1SS133	Q2310	405 020 7402	TR 2SC945A-P
D2454	407 012 4406	DIODE 1SS133	or	405 020 7204	TR 2SC945A-K
D2455	407 012 4406	DIODE 1SS133	or	405 019 3705	TR 2SC536-G-AUD-SPA
D2456	407 012 4406	DIODE 1SS133	or	405 017 9709	TR 2SC3330-U
D2466	407 012 4406	DIODE 1SS133	or	405 017 9600	TR 2SC3330-T
D4500	407 012 4406	DIODE 1SS133	or	405 011 8609	TR 2SC1740S-S
D4960	407 012 4406	DIODE 1SS133	or	405 011 8500	TR 2SC1740S-R
D4991	407 099 6805	ZENER DIODE MTZJ13B	or	405 143 8706	TR KTC3199-GR
D4992	△ 407 099 6003	ZENER DIODE MTZJ9.1B	Q2451	405 036 3702	TR 2SA1564
D4993	407 012 4406	DIODE 1SS133	or	405 151 5209	TR KRA107M

# PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
or	405 000 0904	TR DTA114YS
or	405 078 2404	TR BN1A4P
Q2452	405 078 2404	TR BN1A4P
or	405 000 0904	TR DTA114YS
or	405 151 5209	TR KRA107M
or	405 036 3702	TR 2SA1564
Q2453	405 036 3702	TR 2SA1564
or	405 151 5209	TR KRA107M
or	405 000 0904	TR DTA114YS
or	405 078 2404	TR BN1A4P
Q4410	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
Q4501	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4502	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q4600	405 155 0002	TR MPSA56
Q4601	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4602	405 019 3804	TR 2SC536-G-NP
or	405 019 2708	TR 2SC536-F-NP
or	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
Q4603	405 141 3208	TR KTC3198-Y
or	405 019 2708	TR 2SC536-F-NP
or	405 141 3307	TR KTC3198-GR
or	405 019 3804	TR 2SC536-G-NP
Q4700	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4800	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4950	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
or	405 141 3208	TR KTC3198-Y
Q4960	405 155 0002	TR MPSA56
Q4961	405 155 0002	TR MPSA56
Q4962	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4963	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4990	△ 405 138 6403	TR KTD2058Y
or	△ 405 095 1602	TR 2SD2061-E
or	△ 405 095 1701	TR 2SD2061-F
Q4991	△ 405 095 1602	TR 2SD2061-E
or	△ 405 095 1701	TR 2SD2061-F
or	△ 405 138 6403	TR KTD2058Y
Q4992	405 141 3703	TR KTA1271-Y
or	405 008 2405	TR 2SB698-F
or	405 008 2504	TR 2SB698-G
Q4993	405 141 3703	TR KTA1271-Y
or	405 008 2405	TR 2SB698-F
or	405 008 2504	TR 2SB698-G
Q4994	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
R4742	△ 402 071 1304	FUSIBLE RES 2.2 JA 1/4W
R4842	△ 402 071 1304	FUSIBLE RES 2.2 JA 1/4W
S0001	614 317 3007	SHIELD,PLATE
S4901	614 215 9828	SWITCH,TACT
SA401	411 021 6405	SCR S-TPG BIN 3X8
SA402	411 021 6405	SCR S-TPG BIN 3X8
SA403	411 021 6405	SCR S-TPG BIN 3X8
SA404	411 021 6405	SCR S-TPG BIN 3X8
SA405	411 021 6405	SCR S-TPG BIN 3X8
SH201	614 310 5404	SHIELD,ANTENA

REF.NO.	PART NO.	DESCRIPTION
T2002	645 046 2023	FILTER,450KHZ
U2101	645 043 6697	TUNER,FM
X2451	645 023 4965	OSC,CRYSTAL 7.2MHZ
XF221	645 010 7665	CERAMIC FILTER 10.70MHZ
or	645 010 0079	CERAMIC FILTER 10.70MHZ
or	614 240 2917	FILTER,CERAM
XF222	645 010 7665	CERAMIC FILTER 10.70MHZ
or	645 010 0079	CERAMIC FILTER 10.70MHZ
or	614 240 2917	FILTER,CERAM
XF231	645 041 9324	CERAMIC FILTER 450KHZ
XF233	645 039 9923	TRANS,IF 10.7MHZ
or	645 040 9981	TRANS,IF 10.7MHZ

## POWER TRANSFORMER, PRIMARY P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 314 9613	ASSY,PWB PT1 (Only Initial)
CN411	614 017 8203	TERMINAL BOARD
CN412	614 017 8203	TERMINAL BOARD
L4191	△ 645 041 3087	INDUCTOR,180U
or	△ 645 038 6053	INDUCTOR,181U
or	△ 645 017 8061	INDUCTOR,181M

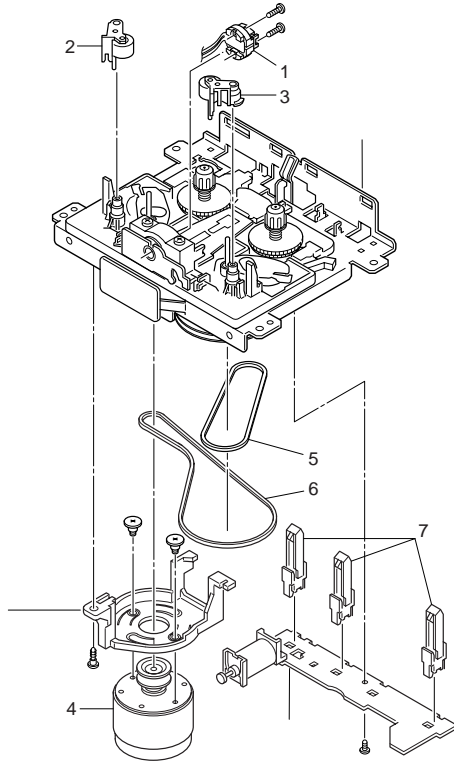
## POWER TRANSFORMER, SECONDARY P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 314 9620	ASSY,PWB PT2 (Only Initial)
CN420	614 020 1222	SOCKET,3P
CN421	614 316 8003	ASSY,WIRE,PT-AMPWIRE
D4280	△ 407 196 5800	DIODE 1N5402BD82
D4281	△ 407 196 5800	DIODE 1N5402BD82
D4282	△ 407 196 5800	DIODE 1N5402BD82
D4283	△ 407 196 5800	DIODE 1N5402BD82
D4284	△ 407 098 3300	DIODE RL153-BF-S2
FCL41	△ 645 006 4760	HOLDER,FUSE
or	△ 645 031 7903	HOLDER,FUSE
FCL42	△ 645 006 4760	HOLDER,FUSE
or	△ 645 031 7903	HOLDER,FUSE
PR420	△ 645 014 2567	PROTECTOR,2.5A 125V

## CD LID SWITCH P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
76	614 316 5170	ASSY,PWB CD LID SW (Only Initial)
S1900	645 044 8782	SWITCH,LEVER
S1901	645 044 8799	SWITCH,LEVER

# PARTS LIST(TAPE MECHANISM)



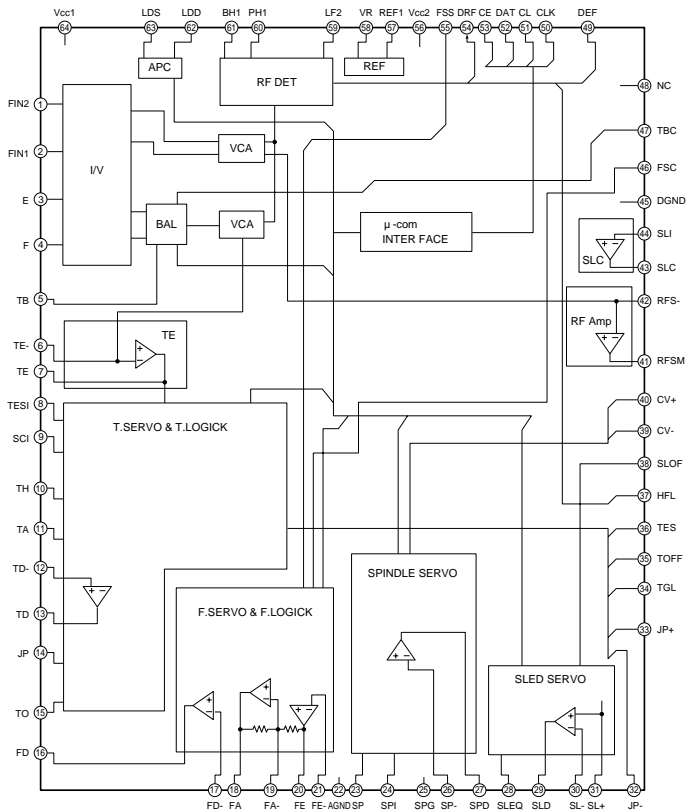
## TAPE MECHANISM

REF.NO.	PART NO.	DESCRIPTION
	614 315 4839	ASSY,MECHA,TM-DA370TN-SH
1	645 045 1799	R/P,E HEAD KC-9142EA-0321
2	645 010 9454	PINCH ROLLER(R) ASSY
3	645 010 9447	PINCH ROLLER(F) ASSY
4	645 045 1751	ASSY,MOTOR
5	645 045 1959	RF BELT
6	645 045 1997	MAIN BELT
7	645 045 2048	DETECT SWITCH MXS01190

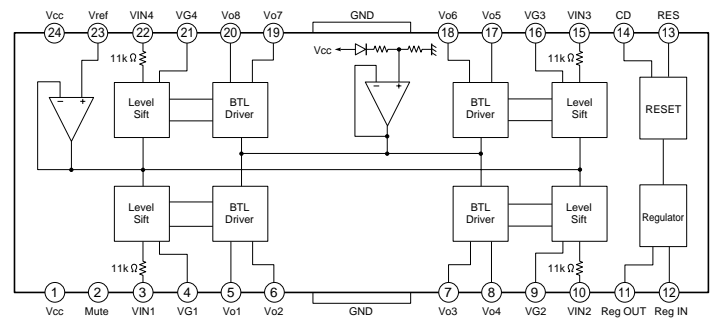
N.S.P : Not supplied as service parts.

## IC BLOCK DIAGRAM & DESCRIPTION

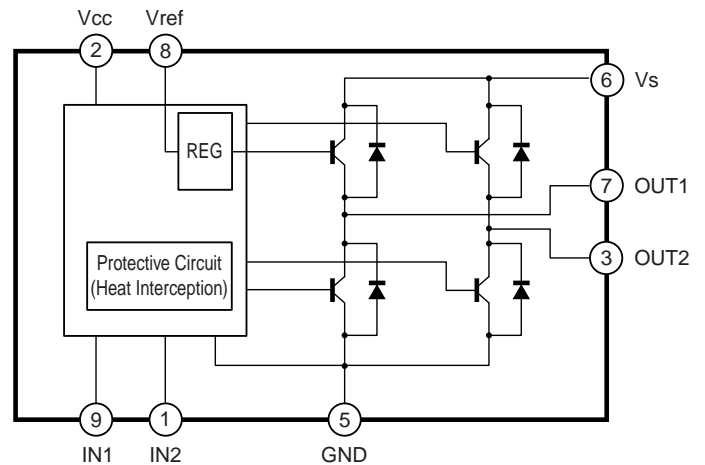
### IC101 LA9241M (Servo Signal Processor)



### IC103 LA6541 (Pick-up Actuator & Motor Driver)

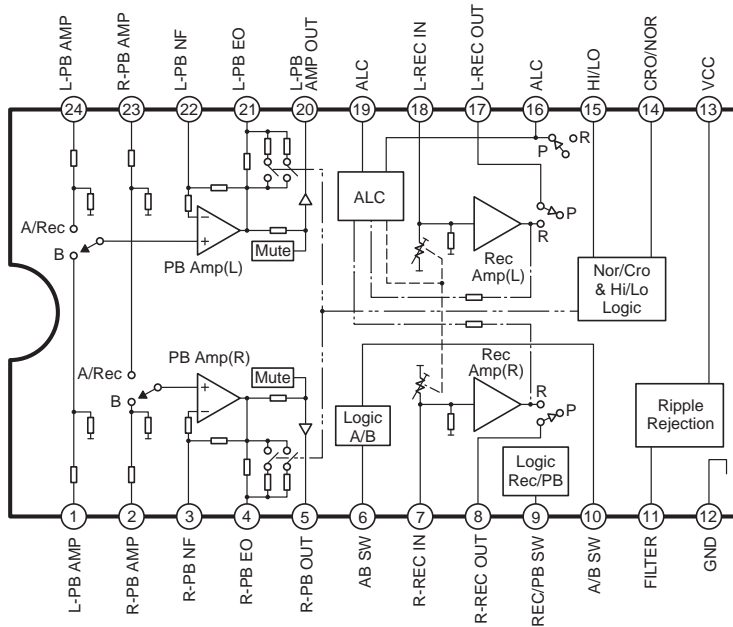


### IC104 TA7291S (Bridge Driver)

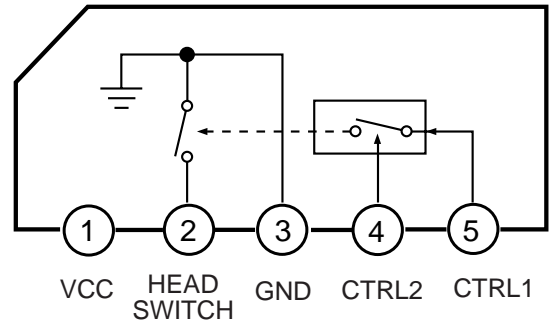


# IC BLOCK DIAGRAM & DESCRIPTION

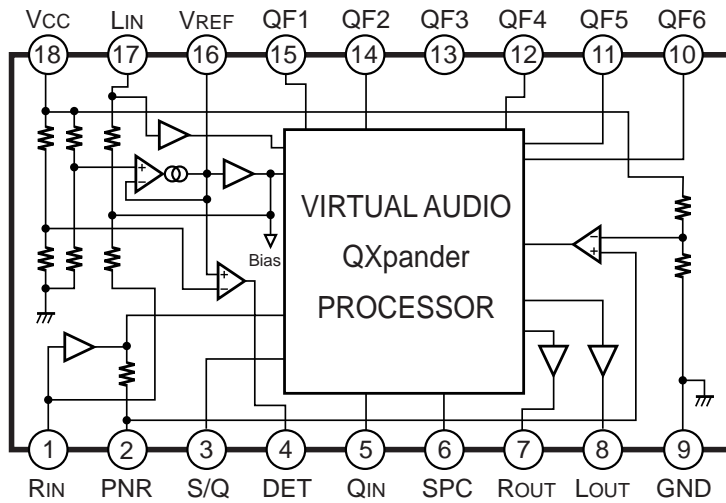
**IC440 AN7348K ( Play/Rec Pre Amp)**



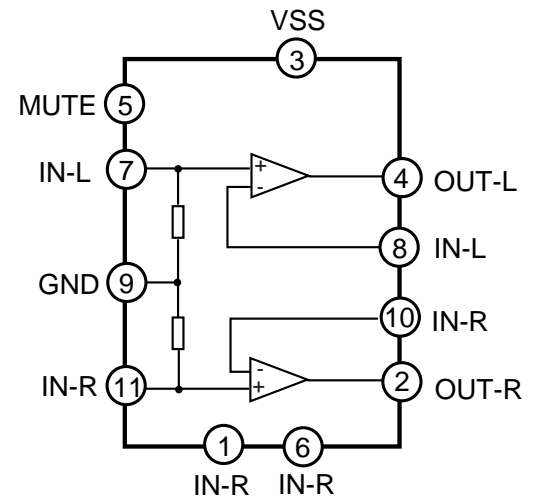
**IC443 BA7755A (Head Switch)**



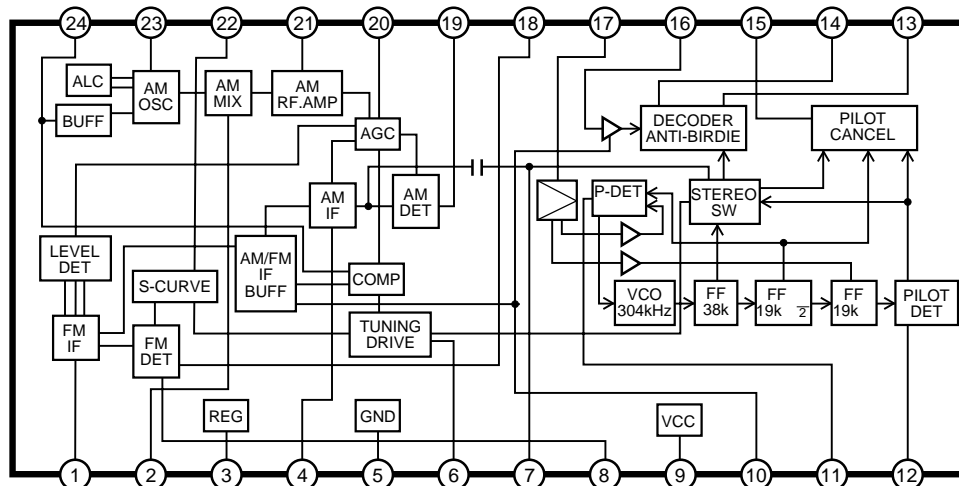
**IC445 MM1453XF (Q Xpander with Spread Control)**



**IC442 TDA7269 (Stereo Amplifier)**



**IC231 LA1844ML (Tuner System)**

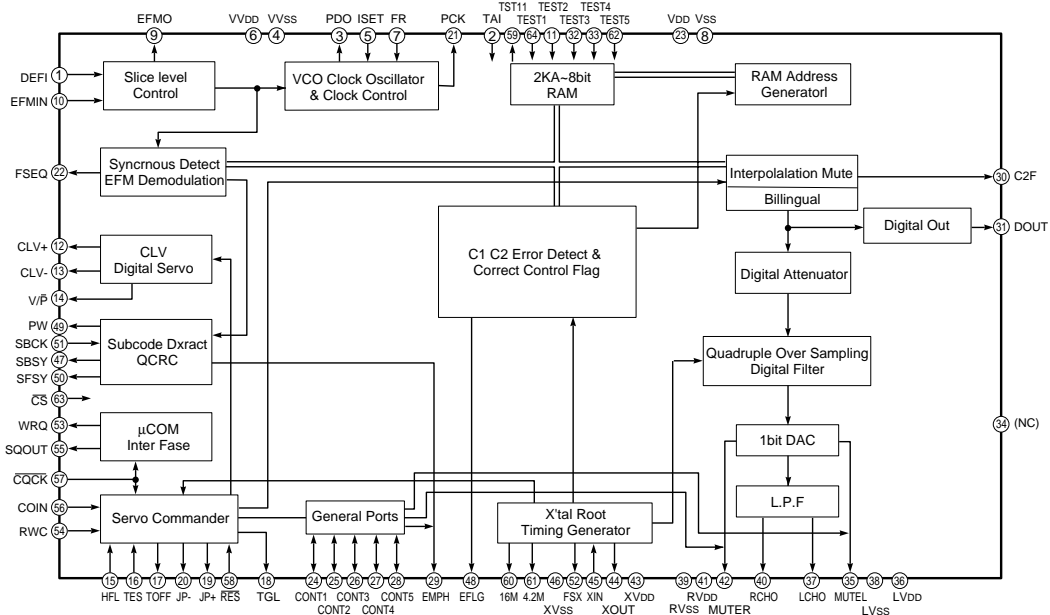


# IC BLOCK DIAGRAM & DESCRIPTION

## IC102 LC78622NE (Digital Signal Processor)

No.	Pin Name	I/O	Function
1	DEFI	I	Input terminal for detect signal of defect
2	TAI	I	Input terminal for test.
3	PDO	O	The phase comparison output terminal for external VCO control.
4	VVSS	-	Ground terminal for built-in VCO
5	ISET	I	Resistance connection terminal for electric current adjustment of PDO output.
6	VVDD	-	Built-in VCO power supply terminal.
7	FR	I	VCO frequency range adjustment.
8	VSS	-	Ground for Digital
9	EFMO	O	EFM signal output terminal for slice level control.
10	EFMIN	I	EFM signal input terminal for slice level control.
11	TEST2	I	TEST pin. Normal time is non connection.
12	CLV+	O	Output terminal for Disc motor control.
13	CLV-	O	Output terminal for Disc motor control.
14	V/P	O	Change of rough servo / phase control Rough servo : "H", Phase control : "L"
15	HFL	I	Input terminal of track search signal.
16	TES	I	Input terminal of tracking error signal.
17	TOFF	O	Output terminal of tracking off.
18	TGL	O	Output terminal for change of tracking gain.
19	JP+	O	Output terminal for tracking jump control.
20	JP-	O	Output terminal for tracking jump control.
21	PCK	O	Clock monitor output terminal for EFM data playback. (4.3218 MHz)
22	FSEQ	O	Output terminal for detect of SYNC signal.
23	DVDD	-	+5V
24	CONT1	I/O	This output can control at serial control from micro processor.
25	CONT2	I/O	
26	CONT3	I/O	
27	CONT4	I/O	
28	CONT5	I/O	
29	EMPH	O	Output terminal of de-emphasis monitor . "H" : de-emphasis
30	C2F	O	Output terminal of C2 flag
31	DOUT	O	Output terminal of digital out

No.	Pin Name	I/O	Function
32	TEST3	I	Test pin.
33	TEST4	I	Test pin.
34	NC	-	Non connection.
35	MUTEL	O	Mute output terminal for L-ch
36	LVDD	-	Power supply for L-ch
37	LCHO	O	Output terminal for L-ch
38	LVSS	-	GND for L-ch
39	RVSS	-	GND for R-ch
40	RCHO	O	Output terminal for R-ch
41	RVDD	-	Power supply for R-ch
42	MUTER	O	Mute output terminal for R-ch
43	XVDD	-	Power supply of crystal oscillation
44	XOUT	O	Connection terminal of crystal oscillation (16.9344MHz)
45	XIN	I	Connection terminal of crystal oscillation (16.9344MHz)
46	XVSS	-	GND of crystal oscillation
47	SBSY	O	Output terminal for synchronizing signal of sub-cord block
48	EFLG	O	Output terminal for correction monitor of C1, C2, Single and Double
49	PW	O	Output terminal for sub-cord of P, Q, R, S, T, U and W
50	SFSY	O	Output terminal for synchronizing signal of sub-cord frame
51	SBCK	I	Input terminal for readout clock of sub-cord
52	FSX	O	Output terminal of Synchronizing signal (7.35kHz)
53	WRQ	O	Output terminal for standby of sub-cord Q output
54	RWC	I	Input terminal of read / write control
55	SQOUT	O	Output terminal of sub-cord Q
56	COIN	I	Input terminal of command from micro processor
57	CQCK	I	Clock input for reading sub-cord from SQOUT
58	RES	I	Reset (turn on : L)
59	TST11	O	Test pin
60	16M	O	16.9344MHz
61	4.2M	O	4.2336MHz
62	TEST5	I	Test pin
63	CS	I	Chip select terminal
64	TEST1	I	Test pin



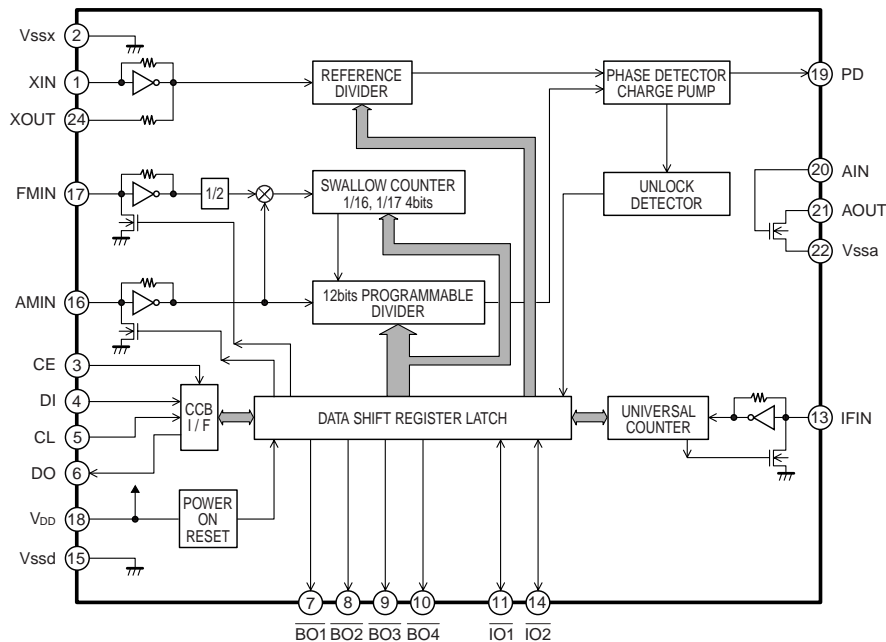
# IC BLOCK DIAGRAM & DESCRIPTION

## IC601 LC867240A-5V46 (Micro Processor)

Pin No	Pin Name	Symbol	I/O	Function
1	P06	AMBER_LED	O	AMBER_LED Output
2	P07	DSP_RESET	O	DSP Reset Signal
3	P10/S00	COIN	O	CD_DSPInterface(command+data Output)
4	P11/SIO/SB0	SQOUT	I	CD_DSPInterface(SubQ dataInput)
5	P12/SCK0	CQCK	O	CD_DSPInterface(Clock)
6	P13/S01	VD_GND	O	Processor Power Check (GND) Control Output
7	P14/SII/SB1	Sift	O	Shift Control for Micon Oscillation Frequency
8	P15/SCK1	RWC	O	CD_DSP Interface(Command+latch Output)
9	P16/BUZ	JOG+	I	Jog Dial +
10	P17/PWM0	JOG-	I	Jog Dial -
11	P70/INT0	DRF	I	DRF Signal Input
12	RES/	Reset		Reset Switch
13	XT1/P74			Sub Clock OSC
14	XT2/P75			Sub Clock OSC
15	VSS1	Vss		Gnd
16	CF1			Main Clock OSC
17	CF2			Main Clock OSC
18	VDD1	Vdd		Power Supply Terminal
19	P80/AN0			
20	P81/AN1	Key1	A/D	Key In
21	P82/AN2	Key2	A/D	Key In
22	P83/AN3	Open SW	I	Top Lid Open Sens. Switch
23	P84/AN4	Close SW	I	Top Lid Close Sens. Switch
24	P85/AN5	LIMIT_SW	I	Limit Switch
25	P86/AN6	C2F	I	DSP C2F Input
26	P87/AN7	M-Media	I	Multi Media Input
27	P71/INT1	WRQ	I	CD DSP Interface ( SubQ Request )
28	P72/INT2/TOIN	RDS_IN	I	Serial Data for RDS IC Input
29	P73/INT2/TOIN	IR	I	Remotecontrol Input
30	S0/PA0	V_CHK	I	Power failure Detect/Processor Power Check Input
31	S1/PA1	G_REVS	I	Miss Recording SW(tapeAB side)Input
32	S2/PA2	G_FWD	I	Miss Recording SW(tapeB side)Input
33	S3/PA3	PACK	I	Tape Park Check Input
34	S4/PA4	TAPE_INI	I	Tape Deck Initialize
35	S5/PA5	REEL	I	Real Rotating signal Input
36	S6/PA6	Tape Play PL	O	Tape Play Plunger Output
37	S7/PA7	Motor	O	Tape Motor Output
38	S8/PA8	B E A T	O	Beat Cancel Control
39	S9/PB1	R Mute	O	Tape Recording Mute
40	S10/PB2	OSC	O	Tape Oscillation ON/OFF Control
41	S11/PB3	SURROUND	O	Surround Output
42	S12/PB4		O	LCD Pin No5
43	S13/PB5		O	LCD Pin No6
44	S14/PB6		O	LCD Pin No7
45	S15/PB7		O	LCD Pin No8
46	S16/PC0		O	LCD Pin No9
47	S17/PC1		O	LCD Pin No10
48	S18/PC2		O	LCD Pin No11
49	S19/PC3		O	LCD Pin No12
50	S19/PC4		O	LCD Pin No13

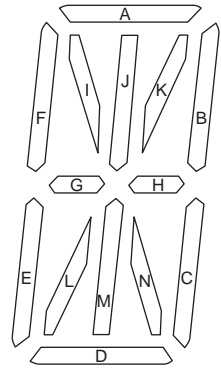
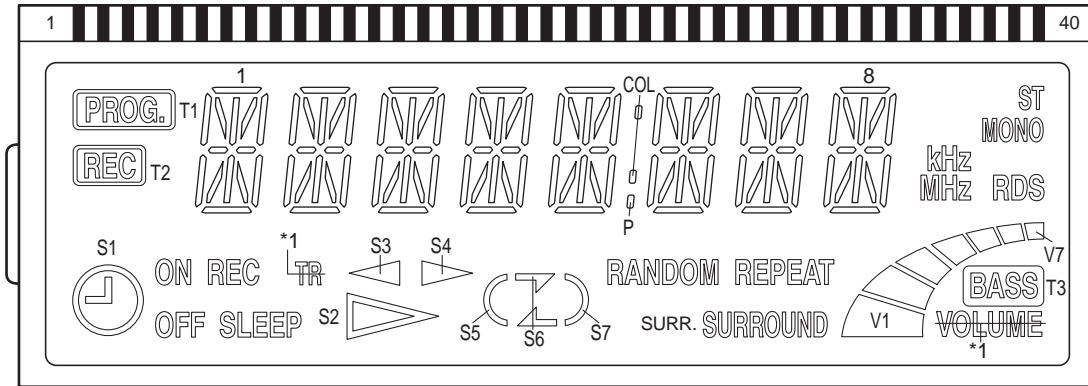
Pin No	Pin Name	Symbol	I/O	Function
51	S21/PC5		O	LCD Pin No14
52	S22/PC6		O	LCD Pin No15
53	S23/PC7		O	LCD Pin No16
54	S24/PD0		O	LCD Pin No17
55	S25/PD1		O	LCD Pin No18
56	VDD2	Vdd	O	Vdd
57	VSS2	Vss	O	Gnd
58	S26/PD2		O	LCD Pin No19
59	S27/PD3		O	LCD Pin No20
60	S28/PD4		O	LCD Pin No21
61	S29/PD5		O	LCD Pin No22
62	S30/PD6		O	LCD Pin No23
63	S31/PD7		O	LCD Pin No24
64	S32/PE0		O	LCD Pin No25
65	S33/PE1		O	LCD Pin No26
66	S34/PE2		O	LCD Pin No27
67	S35/PE3		O	LCD Pin No28
68	S36/PE4		O	LCD Pin No29
69	S37/PE5		O	LCD Pin No30
70	S38/PE6		O	LCD Pin No31
71	S39/PE7		O	LCD Pin No32
72	S40/PF0		O	LCD Pin No33
73	S41/PF1		O	LCD Pin No34
74	S42/PF2		O	LCD Pin No35
75	S43/PF3		O	LCD Pin No36
76	S44/PF4		O	LCD Pin No37
77	S45/PF5		O	LCD Pin No38
78	S46/PF6		O	LCD Pin No39
79	S47/PF7		O	LCD Pin No40
80	V3/PL6			
81	V2/PL5			
82	V1/PL4			
83	COM0/PL0	LCD COM1	O	LCD COM 1 (LCD Panel Pin1)
84	COM1/PL1	LCD COM2	O	LCD COM 2 (LCD Panel Pin2)
85	COM2/PL2	LCD COM3	O	LCD COM 3 (LCD Panel Pin3)
86	COM4/PL3	LCD COM4	O	LCD COM 4 (LCD Panel Pin4)
87	P30	DCHK	O	Serial Clock Output for Tuner/Volume FUNC IC
88	P31	TU_DUT	O	Serial Data Output for Tuner IC
89	VSS3	Vss	O	Gnd
90	VDD3	Vdd	O	Power Supply Terminal
91	P32	VF_DO	O	Serial Data Output for VOL_FUNC IC
92	P33	VF_CE	O	Serial Data Output for VOL_FUNC IC
93	P34	TU_CE	O	Serial Latch Output for TU IC
94	P35	TU_DI	I	Serial Data Input for TU IC
95	P00	LID_M+	O	Top Lid Motor Control Output +
96	P01	LID_M-	O	Top Lid Motor Control Output -
97	P02	P_CON	O	Power Control
98	P03	PRE_MUTE	O	Pre Amp Mute Output
99	P04	MAIN_MUTE	O	Power Amp Mute
100	P05	BLUE_LED	O	Blue LED Output

## IC241 LC72121M-D (PLL Synthesizer)



# LCD DISPLAY DESCRIPTION

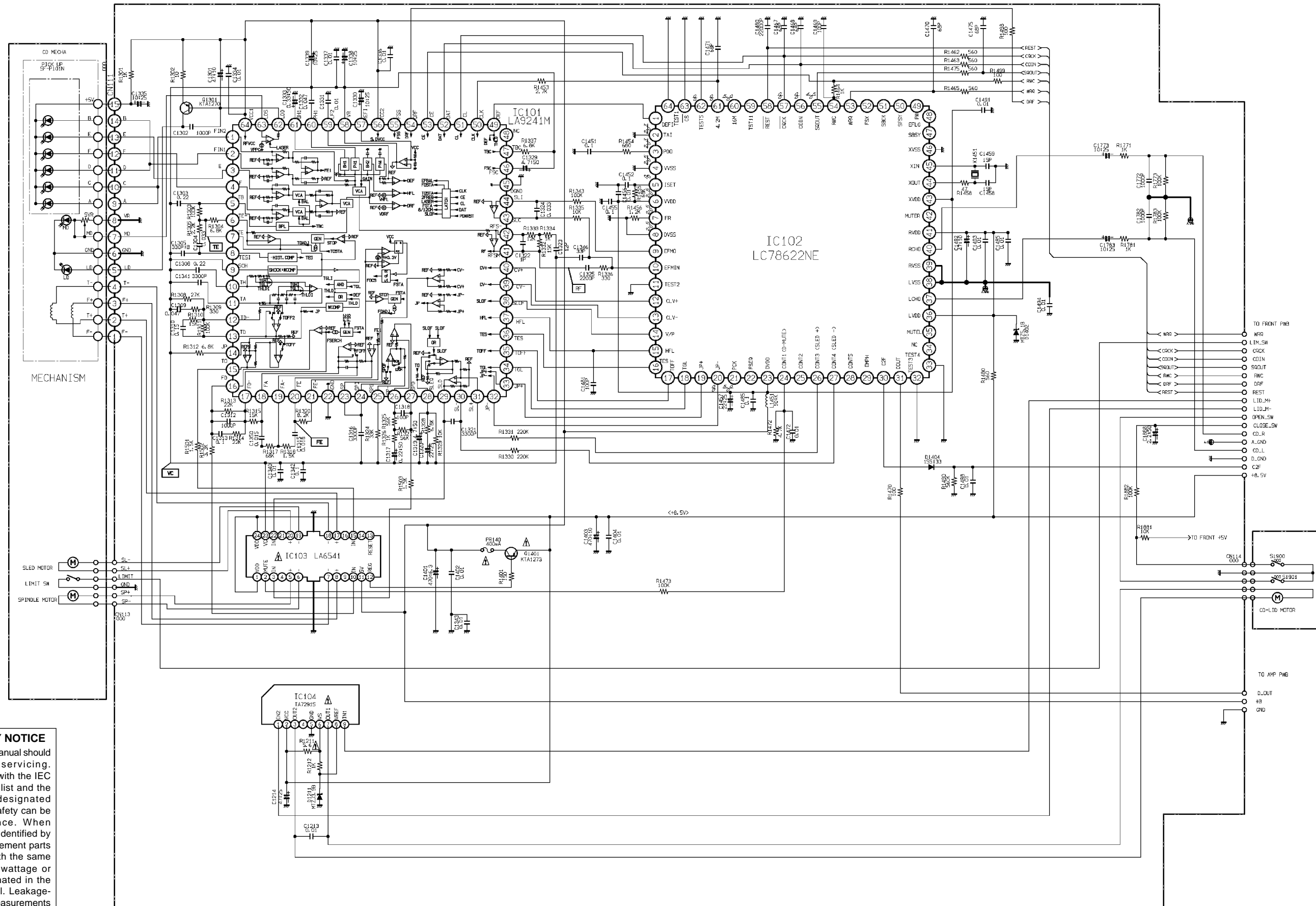
LCD60



PAD NO.	COM1	COM2	COM3	COM4	PAD NO.	COM1	COM2	COM3	COM4
1	COM1	--	--	--	21	5F	5G	5E	S7
2	--	COM2	--	--	22	5A	5I	5M	5L
3	--	--	COM3	--	23	5K	5J	5N	5D
4	--	--	--	COM4	24	5B	5H	5C	COL
5	1F	1G	1E	OFF	25	6F	6G	6E	P
6	1A	1I	1M	1L	26	6A	6I	6M	6L
7	1K	1J	1N	1D	27	6K	6J	6N	6D
8	1B	1H	1C	REC	28	6B	6H	6C	RANDOM
9	2F	2G	2E	SLEEP	29	7F	7G	7E	SURR.
10	2A	2I	2M	2L	30	7A	7I	7M	7L
11	2K	2J	2N	2D	31	7K	7J	7N	7D
12	2B	2H	2C	S2	32	7B	7H	7C	REPEAT
13	3F	3G	3E	S3	33	8F	8G	8E	MHz
14	3A	3I	3M	3L	34	8A	8I	8M	8L
15	3K	3J	3N	3D	35	8K	8J	8N	8D
16	3B	3H	3C	S4	36	8B	8H	8C	KHz
17	4F	4G	4E	S5	37	T1	T2	ON	S1
18	4A	4I	4M	4L	38	ST	MONO	RDS	T3
19	4K	4J	4N	4D	39	*1	V1	V2	V3
20	4B	4H	4C	S6	40	V4	V5	V6	V7



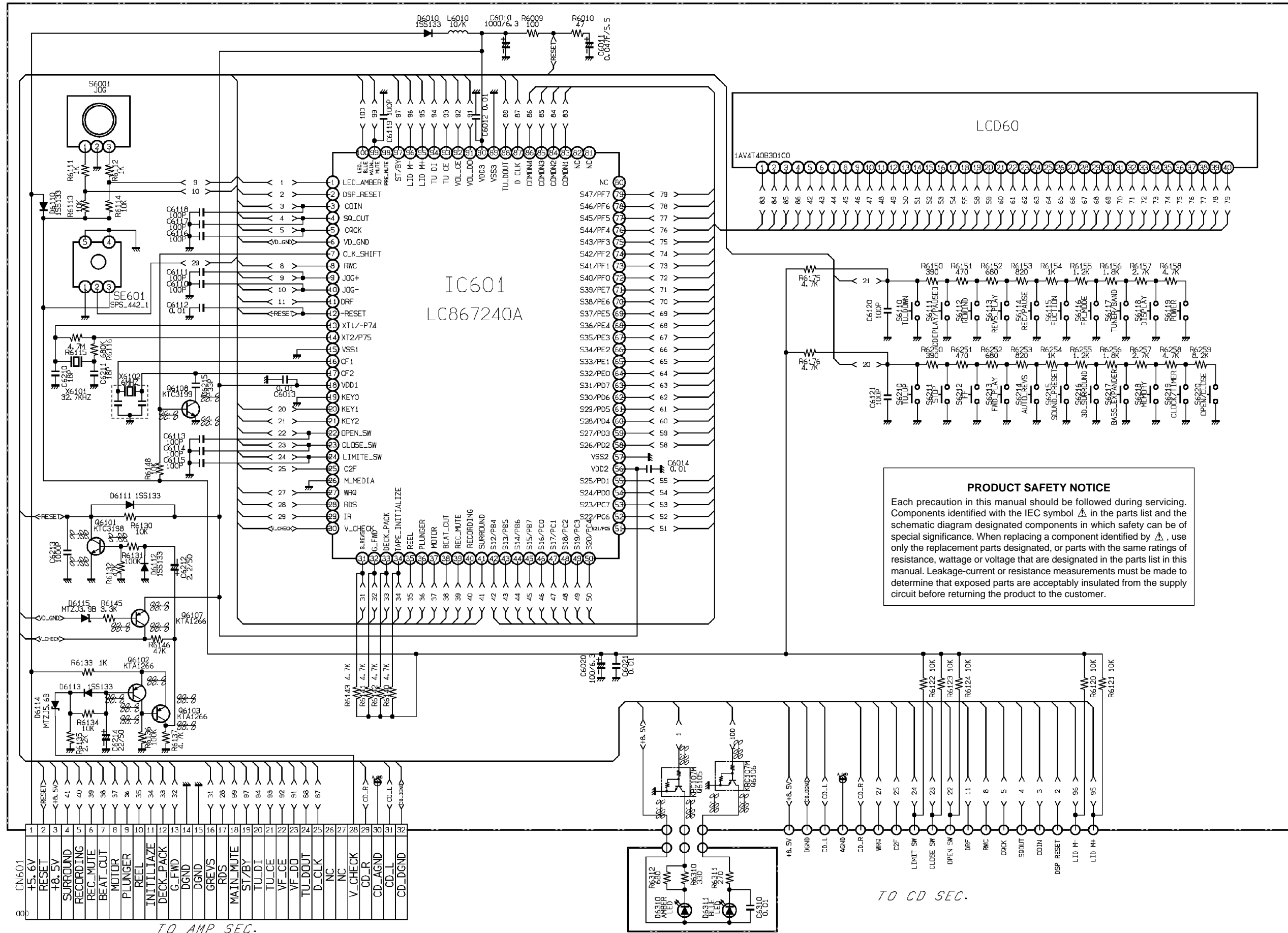
**SCHEMATIC DIAGRAM (CD)**



**PRODUCT SAFETY NOTICE**

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  $\Delta$  in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by  $\Delta$ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

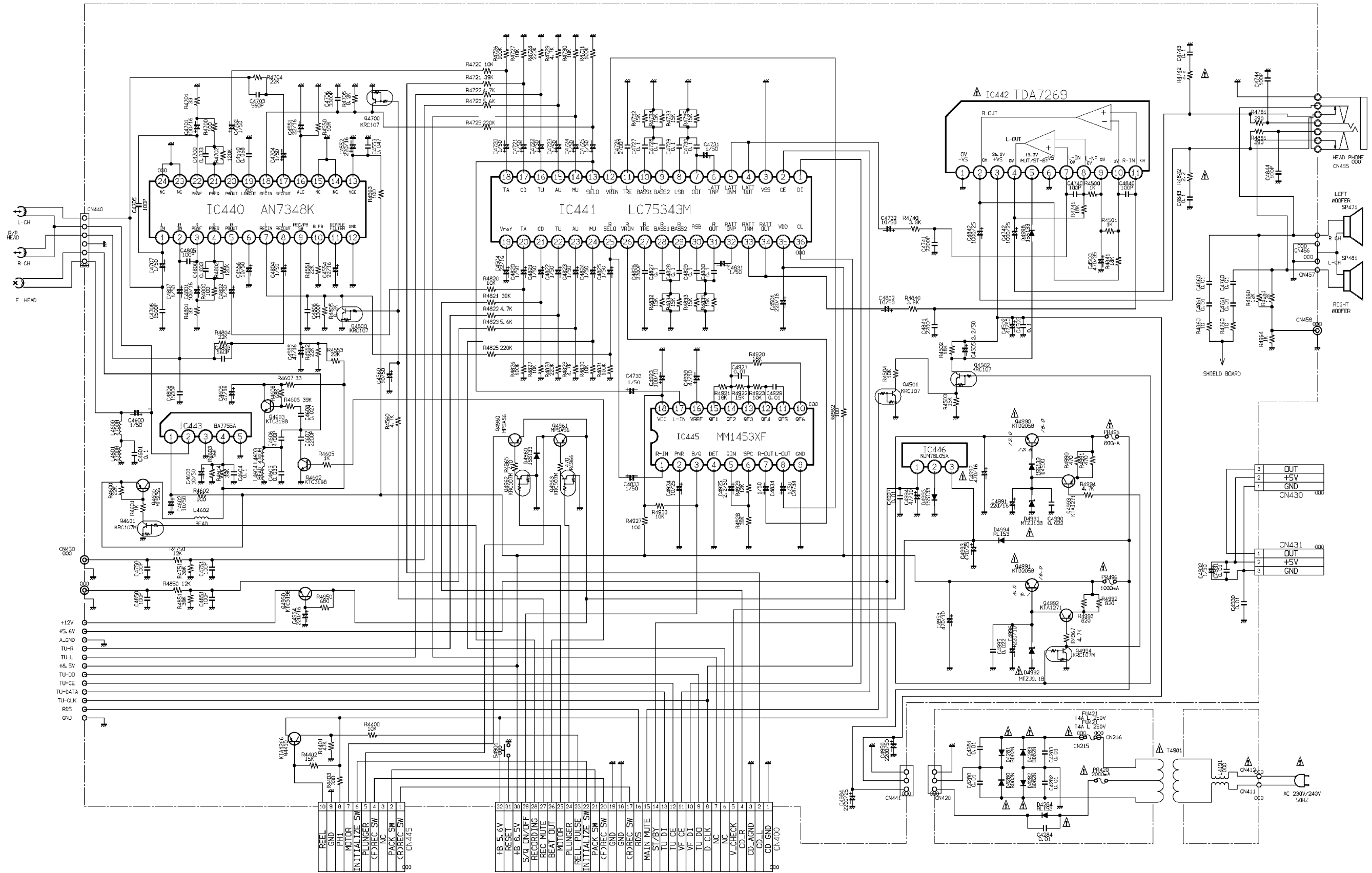
**SCHEMATIC DIAGRAM (FRONT)**



**PRODUCT SAFETY NOTICE**

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  $\Delta$  in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by  $\Delta$ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

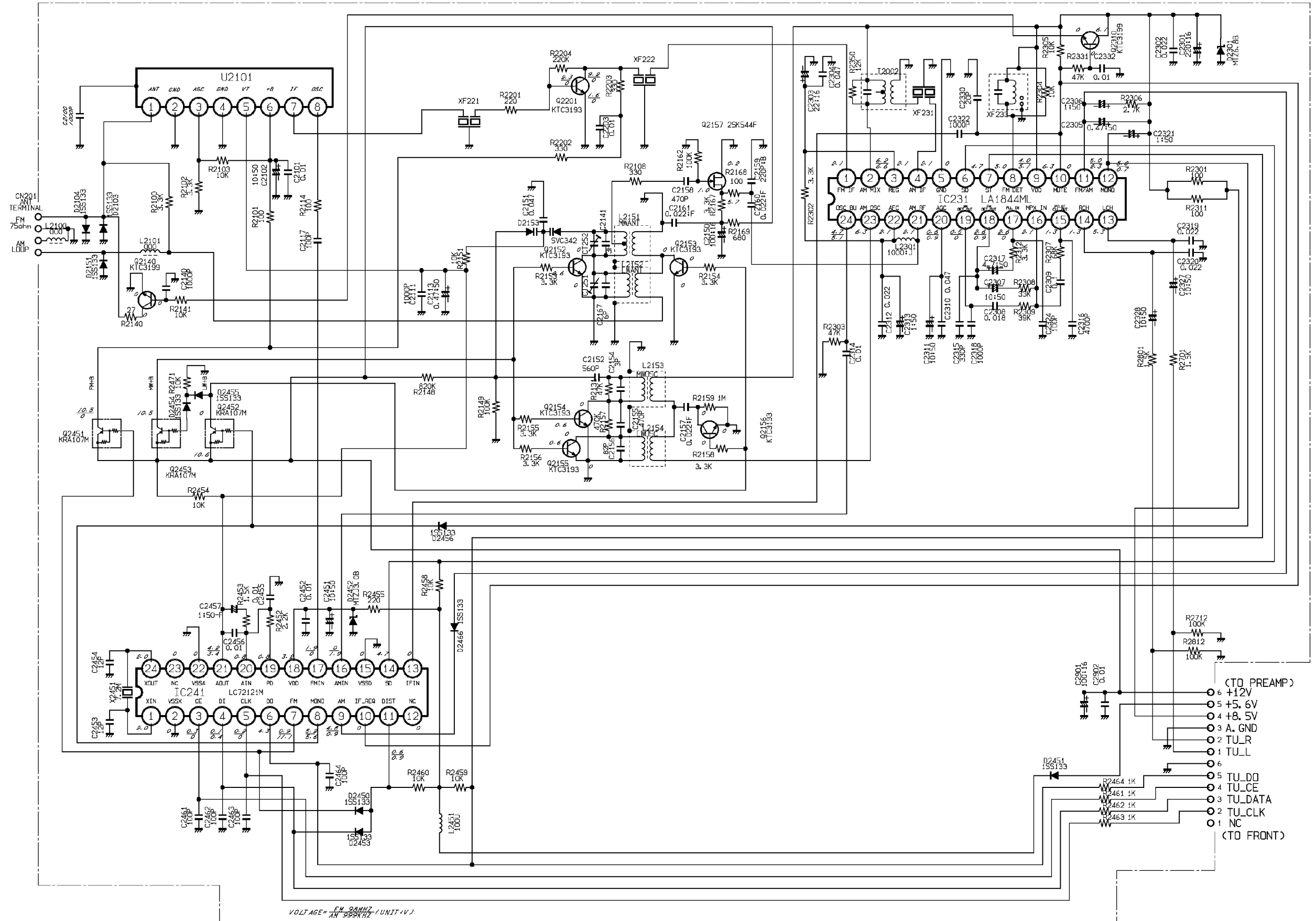
**SCHEMATIC DIAGRAM (AMPLIFIER)**



**PRODUCT SAFETY NOTICE**

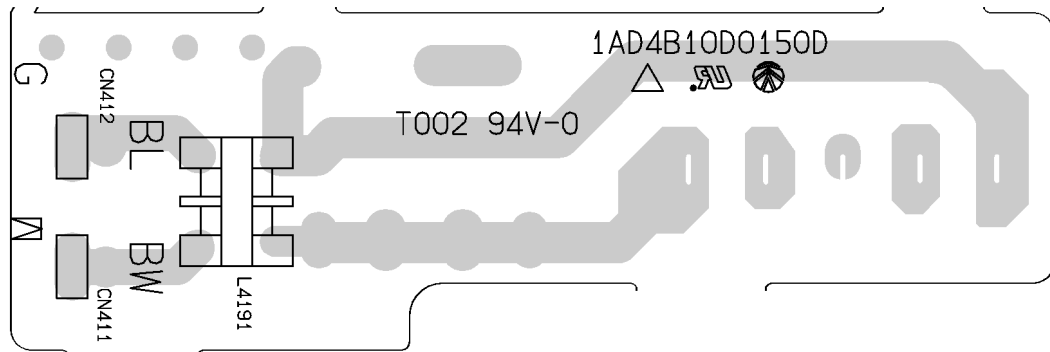
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  $\Delta$  in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by  $\Delta$ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

**SCHEMATIC DIAGRAM (TUNER)**

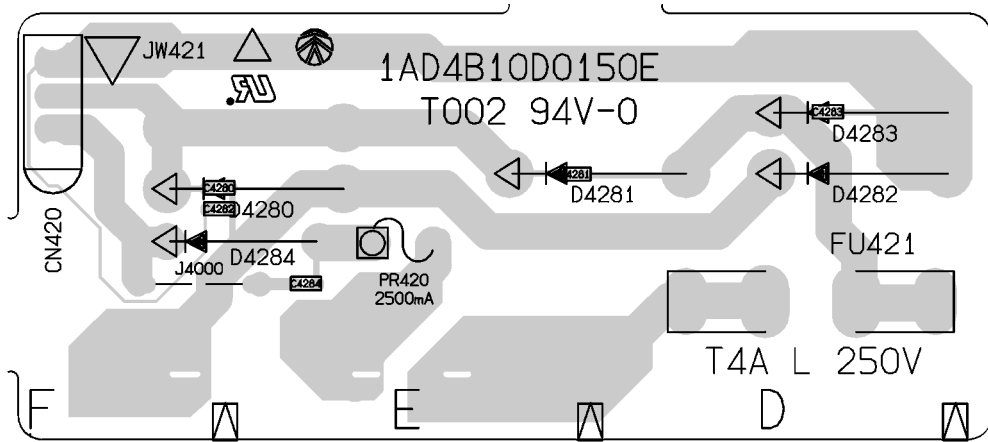


**WIRING DIAGRAM(PRIMARY+ SECONDARY POWER TRANSFORMER AND CD LID SWITCH)**

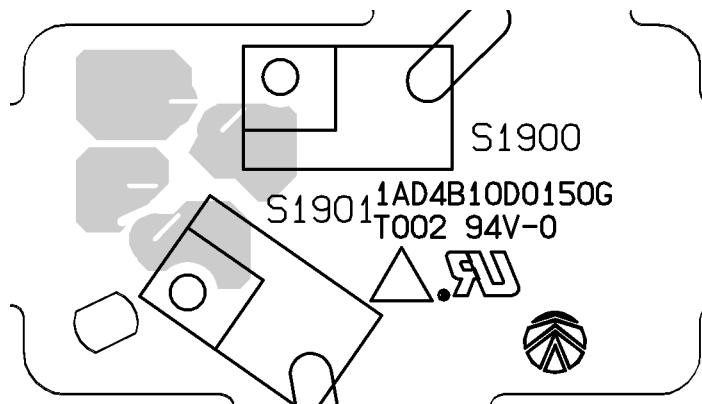
**POWER TRANSFORMER, PRIMARY P.W.BOARD**



**POWER TRANSFORMER, SECONDARY P.W.BOARD**



**CD LID SWITCH P.W.BOARD**



# VOLTAGE TABLE

## IC101 LA9241M

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOL(V)	2.51	2.51	2.54	2.54	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
PIN	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
VOL(V)	2.52	2.52	2.52	0	2.52	2.52	2.52	2.52	2.52	2.52	2.02	2.28	2.28	0	0	4.98	4.98	0
PIN	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
VOL(V)	0	4.98	0	0	1.62	2.44	2.46	2.55	0	2.54	2.52	0	0	2.32	4.71	4.71	0	0
PIN	55	56	57	58	59	60	61	62	63	64								
VOL(V)	0	4.99	2.53	2.53	0.97	0.98	2.23	4.35	0	5.01								

## IC102 LC78622NE

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOL(V)	0	0	0	0	1.53	4.97	0.1	0	2.54	2.44	0	0	0	4.95	0	0.06	4.96	4.96
PIN	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
VOL(V)	0	0	2.46	0	4.97	4.86	0	0	0	0	0	4.89	2.49	0	0	0	4.96	4.98
PIN	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
VOL(V)	2.03	0	0	2.04	4.98	4.94	4.96	2.15	2.11	0	0.12	2.27	0	2.48	0.1	2.48	0	0
PIN	55	56	57	58	59	60	61	62	63	64								
VOL(V)	0	4.71	4.63	4.75	0	2.01	2.22	0	0	0								

## IC103 LA6541

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOL(V)	8.63	4.81	2.51	2.52	3.88	3.9	3.91	3.91	2.53	2.53	5.02	8.02	4.99	4.83	2.52	2.53	3.89	3.93
PIN	19	20	21	22	23	24												
VOL(V)	3.93	3.93	2.53	2.53	2.53	8.63												

## IC104 TA7291

UNIT:V

PIN	1	2	3	4	5	6	7	8	9									
VOL(V)	4.76	8.64	0.56	0	0	8.61	0.56	4.03	4.76									

## IC231 LA1844ML

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOL(V)	2.31	6.7	2.31	2.31	0	4.65	4.65	6.7	6.7	0	5.61	5.69	3.21	3.21	2.25	2.31	2.05	2.53
PIN	19	20	21	22	23	24												
VOL(V)	0	0.27	2.58	2.58	6.69	6.69												

## IC241 LC72121M

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOL(V)	1.52	0	0.22	0.14	0.17	4.65	0	11.6	5.38	0	0.61	0	0	4.65	0	0.07	1.49	3.1
PIN	19	20	21	22	23	24												
VOL(V)	0.9	0.9	1.43	0	0	1.52												

## IC440 AN7348K

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOL(V)	0	0	0.66	3.23	3.23	0.07	0	0	0	0	4.99	0	6.99	0	0	0	0	0
PIN	19	20	21	22	23	24												
VOL(V)	0.16	3.2	3.91	0.67	0	0												

## IC441 LC75343M

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOL(V)	0	0	0	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41
PIN	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
VOL(V)	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	6.83	0

## IC442 TDA7269

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11							
VOL(V)	0	17.3	35.1	17.3	30.7	0	17.3	17.3	17.3	17.3	17.3							

## IC443 BA7755A

UNIT:V

PIN	1	2	3	4	5
VOL(V)	8.22	0	0	0	0

# VOLTAGE TABLE

## IC445 MM1453XF

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOL(V)	3.42	3.42	0	0	3.42	3.42	3.42	3.42	0	3.42	3.42		3.42	3.42	3.42	4.09	3.42	7.38

## IC446 NJM78L05

UNIT:V

PIN	1	2	3
VOL(V)	17.3	0.58	5.48

## IC601 LC867240A

UNIT:V

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOL(V)	0	4.75	4.75	0	4.75	4.75	0	0	4.83	4.83	0	4.75	2.55	2.66	0	2.1	2.4	0
PIN	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
VOL(V)	0	4.85	4.85	0	0	4.75	0	0	0	4.66	4.83	4.6	4.83	4.83	4.83	4.83	2.01	0
PIN	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
VOL(V)	0	0	4.67	0	0	2.41	2.41	2.39	2.38	2.39	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41
PIN	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
VOL(V)	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41
PIN	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
VOL(V)	2.41	2.41	2.41	2.41	2.41	2.41	2.41	0	0	0.1	2.44	2.44	2.44	2.44	0	0	0	4.75
PIN	91	92	93	94	95	96	97	98	99	100								
VOL(V)	0	0	0	4.73	4.76	4.76	4.71	4.75	0	4.71								

## TRANSOSTOR

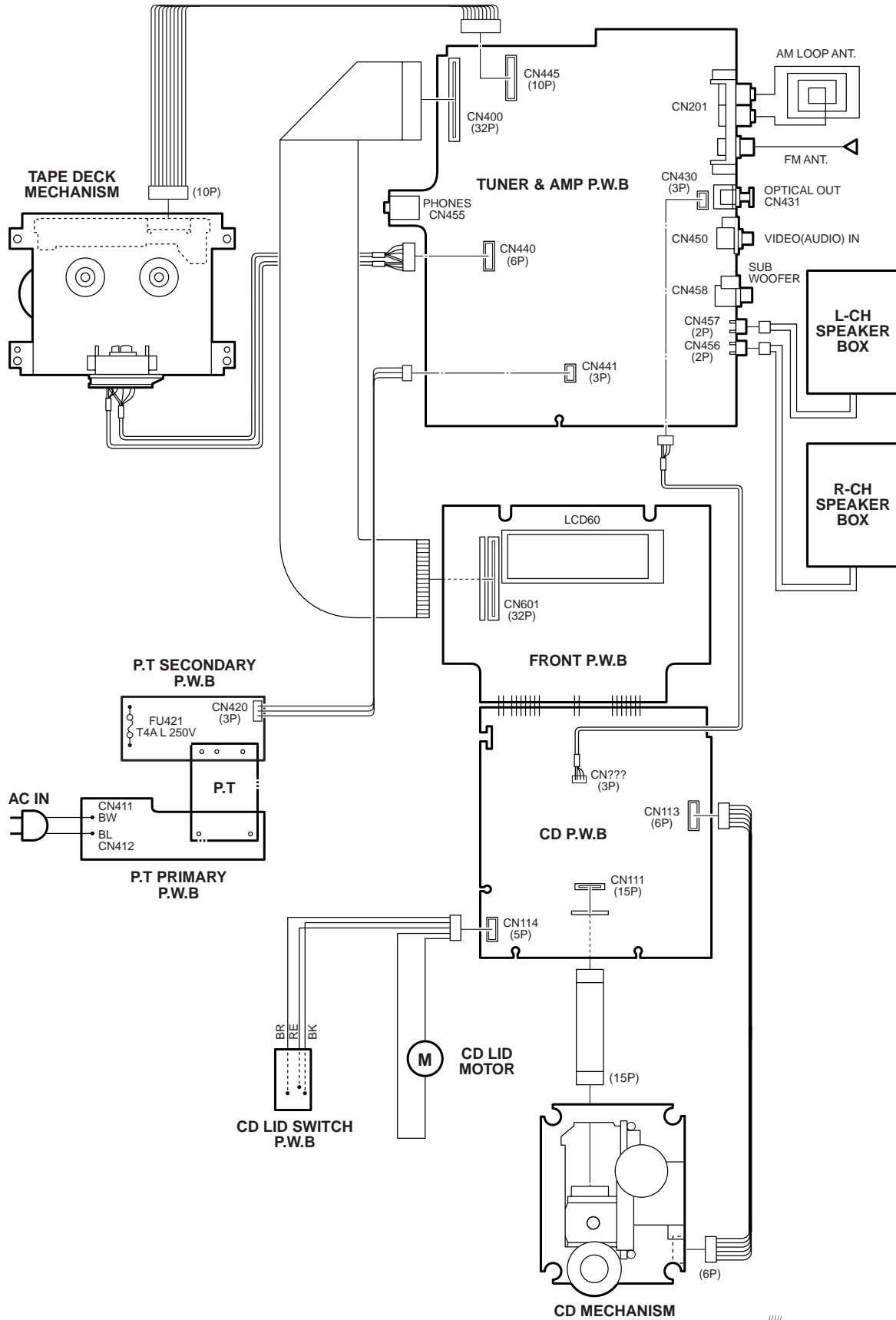
UNIT:V

	Q4410	Q4501	Q4502	Q4600	Q4601	Q4602	Q4603	Q4700	Q4800	Q4950	Q4960	Q4961	Q4962	Q4963	Q4990	Q4991	Q4992	Q4993
E	5.46	0	4.02	8.7	0	0	0	0	0	11.9	12.6	12.6	0	0	12.5	8.69	9.35	13.6
C	5.45	0	3.08	0	0.68	0	0	0	0	11.3	0	0	12.3	12.1	17.6	17.6	9.33	13.6
B	4.81	4.67	4.68	8.67	0	0	0	2.23	4.73	11.6	12	12.1	0	0	13.1	9.33	8.67	12.9

	Q4994	Q1301	Q1401	Q6101	Q6102	Q6103	Q6105	Q6106	Q6107	Q6108	Q2140	Q2152	Q2153	Q2154	Q2155	Q2156	Q2158	Q2201
E	0	4.97	8.64	0	4.52	4.52	0	0	4.76	0	0	0	0	0	0	0	10.3	0
C	0	1.53	5.04	4.76	3.88	4.46	7.18	0.12	4.6	0.66	0	0	0	0	0	0	0.16	8.44
B	4.67	4.33	8.04	0	11.8	3.88	0	4.71	4.74	0	0	0.79	0	0.78	0.78	0	0	0.67

	Q2310	Q2451	Q2452	Q2453														
E	0	10.7	10.7	10.7														
C	6.69	10.6	0	11.6														
B	0	0	10.6	5.96														

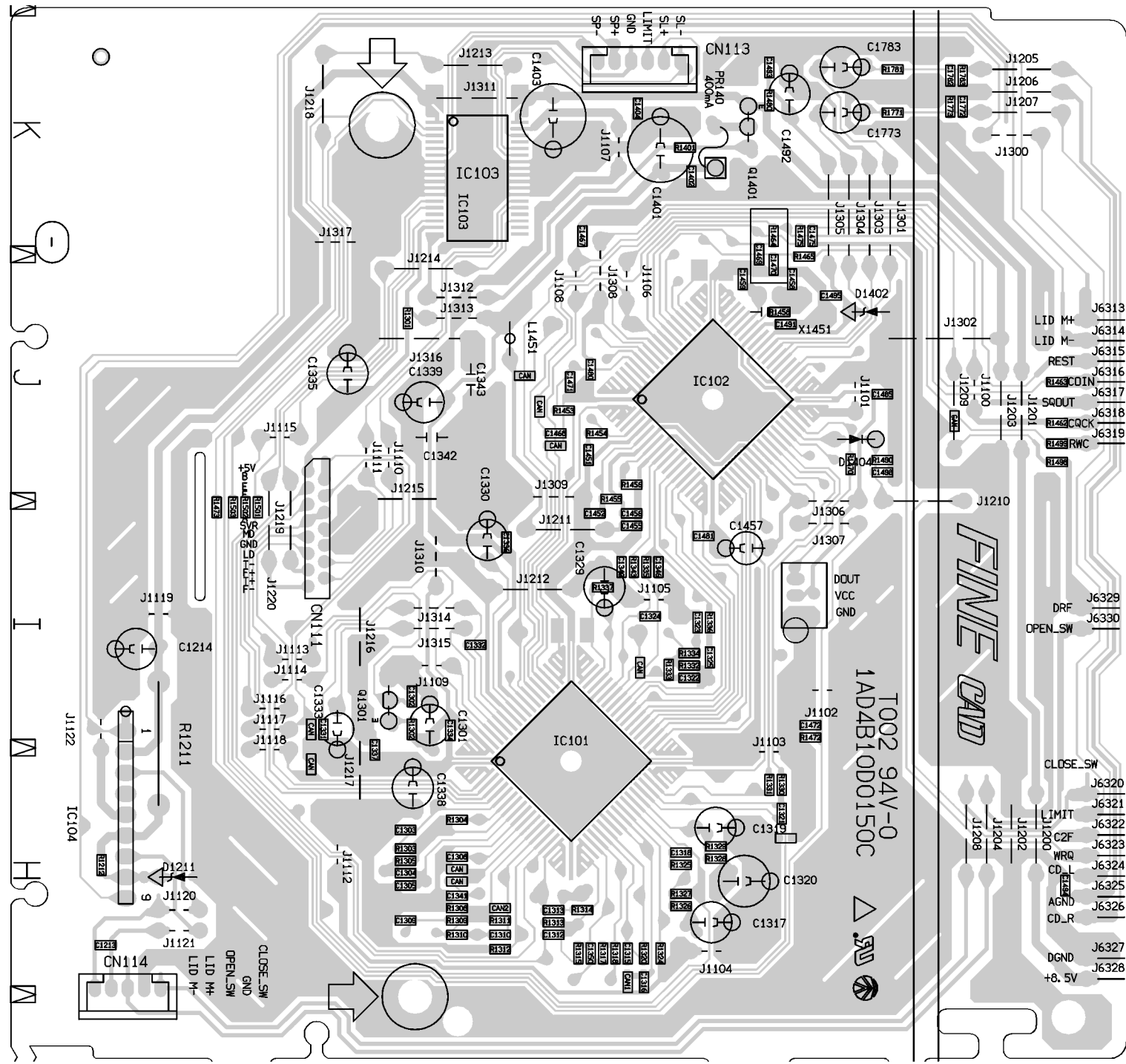
# WIRING CONNECTION



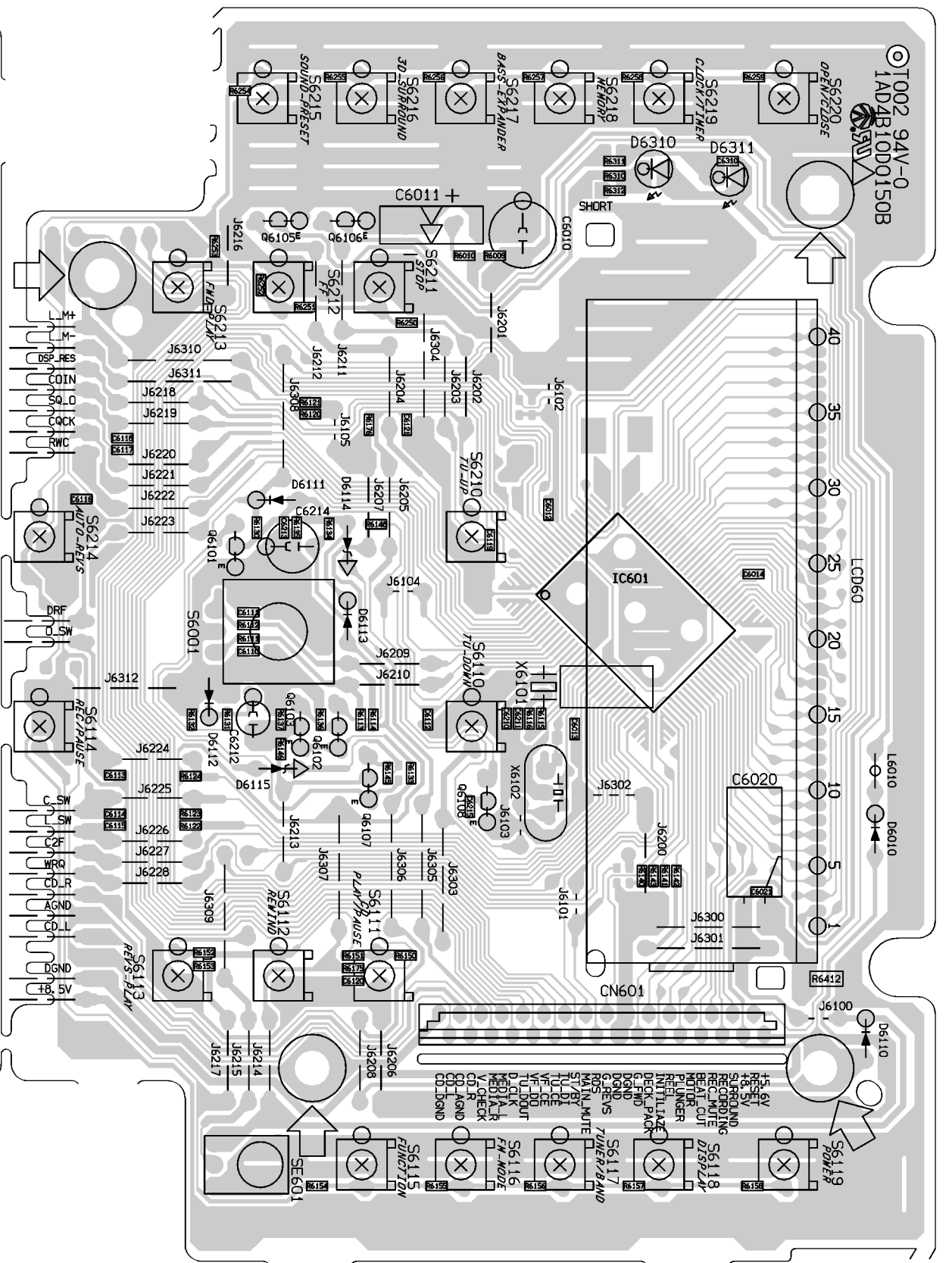
**SANYO**



CD P.W.BOARD



FRONT P.W.BOARD



TUNER P.W.BOARD

AMPLIFIER P.W.BOARD

